

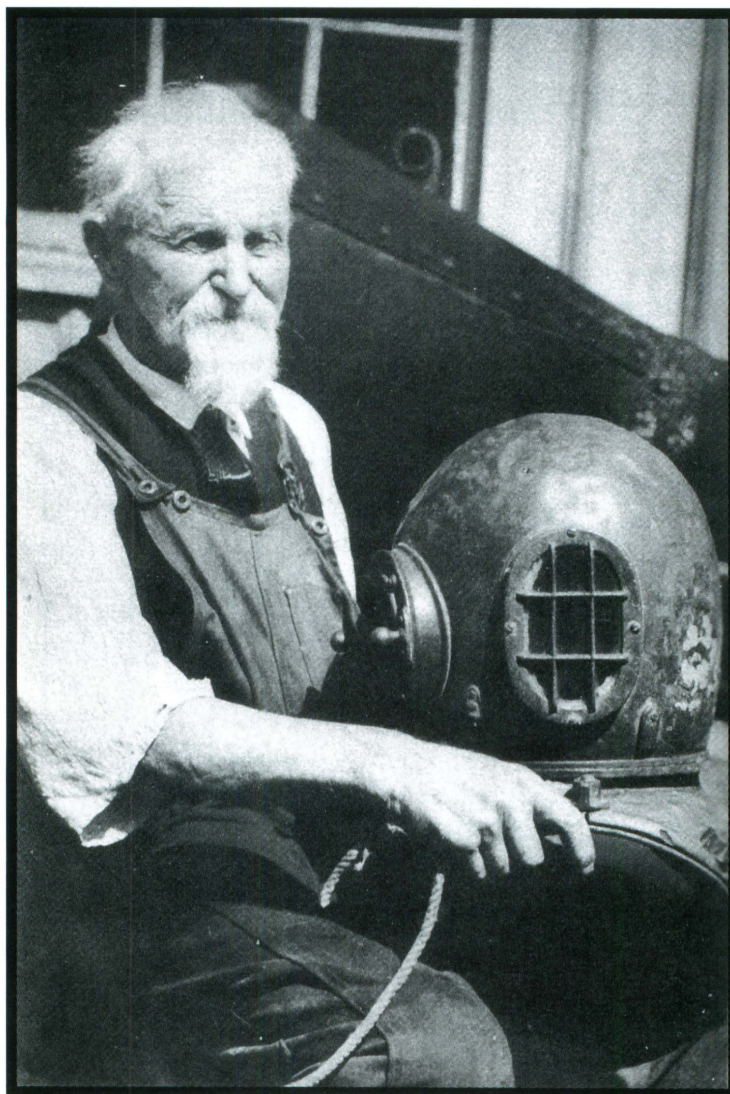


HISTORICAL DIVER

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Alfred Pahlberg

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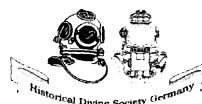
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HISTORICAL DIVER

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FEATURE

Alfred Pahlberg. “Dean of all Deep Sea Divers in this Country.” 20

Starting his career with Captain Thomas A. Scott in 1872, Swedish immigrant Alfred Pahlberg went on to earn the title, “Dean of all Deep Sea Divers.” His place in American diving history is interwoven with the rise of Merritt Chapman and Scott, making his first dive for “Old Man Scott” on the construction of Race Rock Lighthouse. That job became the stuff of construction diving legend. Derricks, huts, and everything else were consistently washed away, as the hardy men tried to tame the job. The engineer facing this daunting task was Francis Hopkinson Smith, and he used Pahlberg as a source for his 1898 book, *Caleb West, Master Diver*, which “immortalized” that diving venture. Pahlberg’s character is also one of the heroes in the book. At the time the interview we publish here took place, Pahlberg was 83 years old and had only stopped diving three years earlier. He was working in the company’s diving locker, maintaining younger men’s gear, after a 56-year underwater career. Pahlberg’s story is a very rare first-hand account of American commercial diving, from an era that is mostly unrecorded. – Leslie Leaney

Farewell Andy. 28

With the passing of Advisory Board member Andreas B. Rechnitzer, P.h.D., the Society and the international diving community lost one of its most knowledgeable and influential leaders. “Andy,” as he was known to colleagues, was involved in many historic events during the beginning of recreational, scientific, and manned deep submergence diving. He was a trusted and valued voice of wisdom for many younger divers and for many diving organizations, including the HDS. His close friend, Ed Cargile, takes a look back at portions of Andy’s career.

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Editorial

With this issue we welcome Oceaneering International as a sponsor of *Historical Diver* magazine. The ties between the HDS and this large and progressive commercial diving corporation go back to the Society's inaugural meeting, which was attended by Oceaneering founders Lad Handelman, Bob Ratcliffe, and Phil Nuytten. Our thanks to Mike Hughes and John Huff for maintaining this very important relationship between the present and the past. As with all of our sponsors, Oceaneering's logo may be found on the back cover of this issue. We urge you to look to our sponsor companies when you need equipment or services in the diving field; they have certainly shown that they support our diving community.

In this issue we hear from an American diver who would definitely be a candidate for our "Voices of the Deep" column if he were still with us. Starting his diving career in the 1870's, and retiring around 1930, Alfred Pahlberg would have made for a very interesting interview. He only quit diving when he was 80 years old. Although our columnist Leslie Jacobs never got to talk to Pahlberg, another lady, Margaret Norris, did, and we are pleased to present her interview with this legendary diver. A senior diver who is with us and still in the water is our Advisory Board member Prof. Hans Hass. This year, at 86 years of age, he dove in the Maldives (HDM #42 p55) and also at Antibes, France, when he revisited his early dive sites. In March 2006, he and Lotte will return to America as part of the Beneath the Sea show's 30th Anniversary celebrations, which is sponsored in part by the HDS. Hans started diving in 1937, took his first underwater photos in 1938, published his first diving book in 1939 and made his first underwater movie in the Caribbean that same year. Those achievements are certainly considered to be historic. I urge you not miss this very rare opportunity to meet these true diving pioneers.

While preparing the "Scuba Workshop" column we were notified of the passing of Ted Eldred, the father of the modern single hose regulator, the Porpoise. Ted's energies have certainly enriched the diving world and HDS members have reciprocated in turn, giving Ted their friendship and recognition. At first Ted must have been wary of these intruders, but their genuine interest in his pioneering labors and their championing of his rightful place in diving history surely warmed his heart. In the last few years his children and grandchildren have taken part in the "Ted Eldred Rally" and shared in his honors. Certainly one highlight of this gentleman's life would have been the introduction of scuba diving to his grandson Adam. In this issue, we happily share, in a curious way, our "Scuba Workshop" with Mr. Porpoise himself, Ted Eldred.

—Kent Rockwell

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2005 International Scuba Diving Hall of Fame Induction



L to R. Eric Bergman, Innes Bergman, Martin Rechnitzer, Andrea Fry, Ernie Brooks, and Captain Don Stewart.

The International Scuba Diving Hall of Fame inducted four new members in a black tie awards banquet in Georgetown, Grand Cayman in October 2005. This was the fifth induction of divers to the Hall of Fame, which was established in 2000 by the Cayman Islands to provide an international “home” for the leaders of recreational diving. Two local diving pioneers were also honored.

Awards for the Inductees and local Ministry of Tourism honorees were presented by the Honorable Charles E. Clifford, JP, Minister for Tourism, Environment, Investment & Commerce. During his speech, the Hon. Minister said that the inductees were dedicated and professional individuals who have taken their love of the sport and applied it through various disciplines to promote awareness, increase safety, and establish a foundation for the development of diving.

International inductees for 2005 were Ernest Brooks, II, Andreas B. Rechnitzer, Ph.D., Dewey Bergman, and Captain Don Stewart. Against a spectacular underwater seascape created by Celebrations, all inductees and their families were very appreciative of the accolade, in particular Martin Rechnitzer and Andrea Fry, son and daughter of Dr. Andreas Rechnitzer, who passed away unexpectedly a few weeks before the induction. Underwater pho-

tographer Ernie Brooks gave an eloquent speech on his love for the sea and black and white photography. Captain Don Stewart read a moving message from the Governor of Bonaire congratulating the Cayman Islands on its miraculous recovery from Hurricane Ivan. The late diving tourism pioneer, Dewey Bergman, was represented by his wife Innes and son Eric, who recalled Dewey’s early adventurous days.

In recognizing the local honorees, Mr. Clifford said, “The diving industry today is a global one. One has only to visit DEMA to see how far-reaching the sport is. And for us, here in the Cayman Islands, there are a number of professionals who have done as much for diving in the Cayman Islands, as our Hall of Fame inductees have done for diving globally.”

For their contribution to the local diving industry, Ministry of Tourism awards were presented to Peter Milburn of “Peter Milburn’s Dive Cayman,” and Tom Hubbell, who was one of the first four people on Cayman to offer diving trips.

The Minister also commented that in spite of the numerous delays caused by Hurricane Ivan last year, the Government is still committed to securing a physical site for the Hall of Fame and he looks forward to a time when

guests and residents can visit the honorees year-round in a fitting and suitable location.

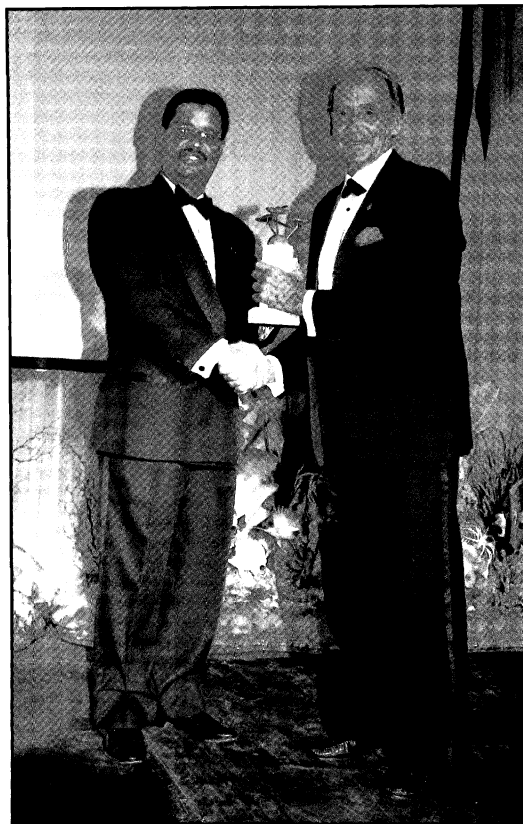
After the induction ceremony, Director of Tourism Ms. Pilar Bush acknowledged with sincere thanks, the Ministry of Tourism, the Department of Tourism, the 2005 International Scuba Diving Hall of Fame Directors, and everyone who contributed to the staging of the 2005 Induction Ceremony.

The International Scuba Diving Hall of Fame is overseen by a Board of Directors comprised of internationally recognized individuals who have contributed to the sport and are actively involved in the scuba diving industry, plus individual leaders of the local community. The Directors are, the Hon. Charles E. Clifford, JP - Chairman, Captain Charles "Chuckie" Ebanks, Rodney McDowall, Tom Ingram, Al Hornsby, Carl Roessler, Ty Sawyer, and Leslie Leaney.

For more information on the International Scuba Diving Hall of Fame and the inductees, or to attend the next induction ceremony, visit on to www.ScubaHallofFame.com.

HDM staff report.

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*The Hon. Charles E. Clifford presents
Ernie Brooks with his Award.*

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HDS 2005 Hans Hass Diving To Adventure Award Daniel Mercier

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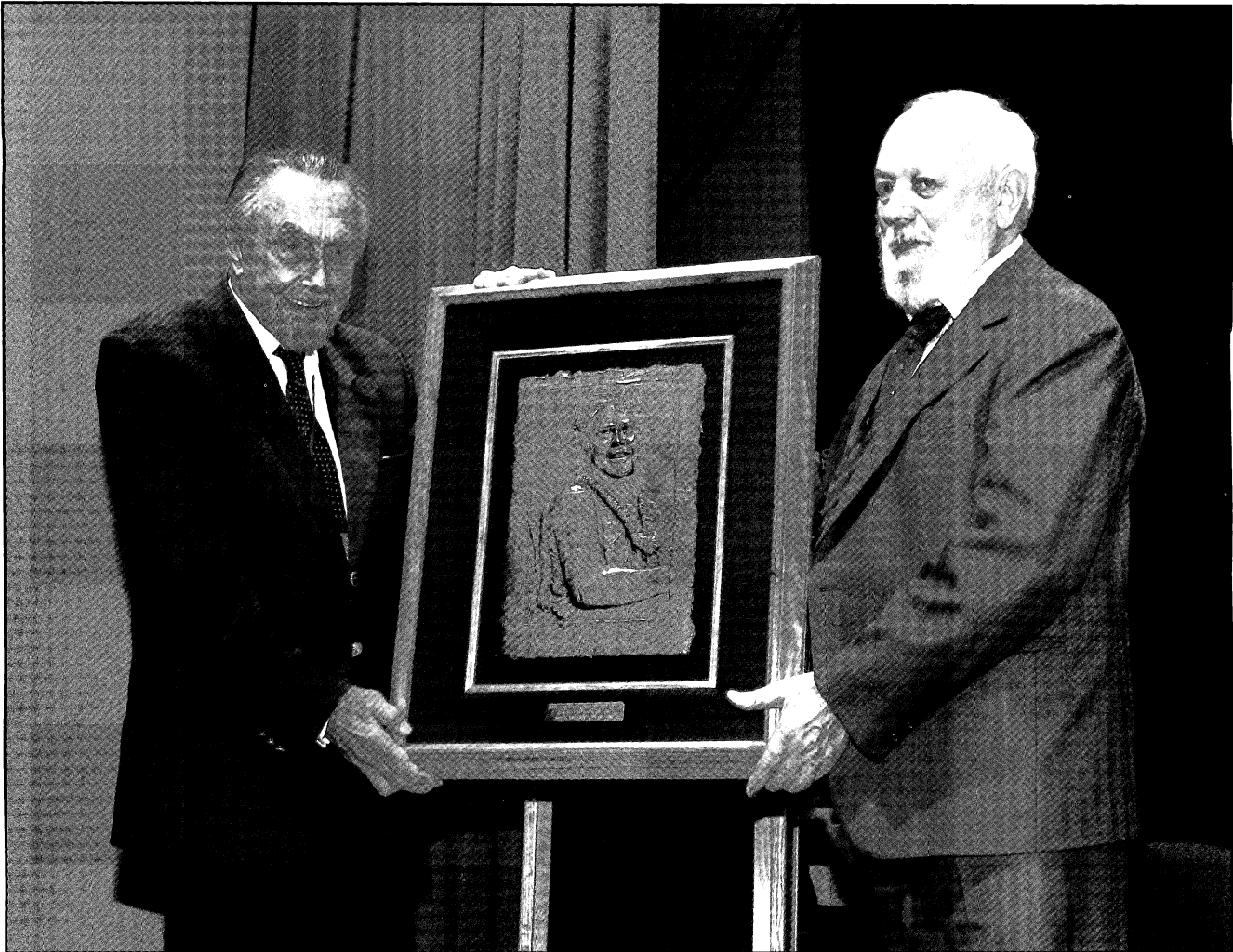


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Professor Hans Hass presents Daniel Mercier with the award at Antibes, October 2005.

The Society is pleased to announce that the 2005 HDS Hans Hass Diving to Adventure Award recipient is Daniel Mercier of France.

Daniel was born in Paris in 1931 and survived the German occupation of the city in WWII. He had a broad interest in travel and adventure and took his first dive in 1947 at Juan-les-Pins, on the Côte d'Azur, exactly ten years after Hans Hass made his first dive at the same location. Shortly thereafter he moved to Switzerland and became interested in youth education.

In 1961 Daniel settled in Antibes and pursued his interest in the sea, becoming a scuba diver. In 1966 he founded the Spondyle Diving Club, which grew into one of the largest in France, and is now one of the most famous clubs in the world. He still presides over the club today. Daniel became a diving instructor in 1967 and

eventually went on to earn the country's highest instructor qualification.

His natural organizational and leadership abilities led Daniel to become President of the Côte d'Azur regional educational commission, a national instructor and a member of France's National & International College. In 1973 he founded the National Association for Diving Instructors, Les Guides de la Mer, a professional syndicated association, and he remains the Honorary-Founding President, carrying on the mission of the group in the seas and oceans of the world. In 1975 he became President of the Côte d'Azur committee of the French Federation of Studies and Underwater Sports. In 1985 Daniel founded and organized the Festival of the Mountains and Images in Antibes, which is based upon his successful format for his underwater image festival.

In 1991 he was involved with creating the Committee of European Professional Diving Instructors (C.E.D.I.P.), a European organization that brought together diving professionals. In 1992 Daniel received the Trident d'Or, becoming a member of the International Academy of Science and Techniques Subaquatiques of Ustica. In 1993 he received the Tauchpionierpreis that honors the diving pioneers in Germanic countries. He was elected Man of the Year in the sports diving category by the Israeli magazine YAM in 1994, and in 2002 received the Medal of Honor of the National Federation of Volunteers of Joinvillias, awarded collectively by the Committee of Provence, Côte d'Azur, Corsica, and Monaco. In 2003 he was awarded the Knight of the Order of Maritime Merit.

Daniel's most influential contribution to international diving was made in 1974 when he and the Spondyle Club team founded the Festival Mondial de l'Image Sous-Marine (World Festival of Underwater Images). Its mission was to promote the underwater world, stimulate interest by displaying the work of underwater photographers, and to make of this event a meeting place for everyone who feels passionately about the sea. This annual event is now in its 33rd year and is known in the professional diving world simply as "Antibes." It has become the world's undisputed Mecca for underwater filmmakers and photographers.

As an example of its success, the year 2000 Festival was visited by an estimated 25,000 attendees, from 41 nations, who visited 120 booths and saw 115 different films, and hundreds of photographs, presented by over 800 participants. Daniel's business model has now been adopted in several other countries.

Countless international budding photographers and filmmakers have launched their careers with a successful showing at Antibes, as amateurs mix with professionals using their love of the sea as their only required introduction. To ensure the longevity of the Festival, Daniel created the Foundation for the Festival of Underwater Images, and remains its President and principal organizer.

Daniel's contributions to promoting international underwater film and photography, and his work in creating educational diving organizations, are recognized by the HDS Hans Hass Diving To Adventure Award.

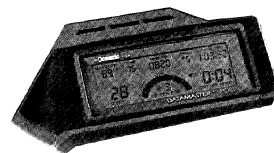
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Association of Diving Contractors Commercial Hall of Fame 2006 Inductees



MR. RODNEY CRUZ

Rod was born in Morton, Illinois and by the age of 16 built his first high-pressure compressor. Rod went on to attend Bradley University and the University of Miami majoring in Marine Biology. Rod was then employed by McWhorter Engineering in Birmingham, Alabama, where he greatly increased his knowledge of air compressors and systems. In Rod's nine years as a commercial diver, he did freelance commercial diving and worked for Worldwide Divers in Morgan City (now known as Oceaneering International). He spent two years in Trinidad working as a sat diver through Sanford Marine Services for Amoco Trinidad, diving the Reading and Bates Mark IV-C "Mini Bell" system. Rod worked for Westinghouse Inc. and was a saturation diver for Fluor Ocean Services in the "Cachalot-450" system.

His uncanny mechanical ability, innovation, determination and God-given talent drove Rod to open his own commercial diving supply business in 1972, which he named Aqua-Air Industries, Inc. With the help of his wife, Dianne, he managed the supply business and developed his own AAI line of more than 70 superior products. One of those products was the first 1250 air filtration system that was standardized by the U.S. Army. In 1976 he started Sta-Sea Offshore Rentals.

Rod Cruz will be remembered for his constant effort to design and manufacture quality products and systems with the highest degree of safety for the commercial diving industry. In all of these activities he gave freely of his time and energy to offer a meaningful contribution to society.

MR. DICK LONG

Dick is the founder, owner and chairman of the board for Diving Unlimited International, Inc. in San Diego, California. He began diving in 1958 and became a contract diver for the U.S. Navy in the Arctic in 1965. In the late '60s and early '70s, Dick owned a diving contracting company and worked with underwater demolition teams doing submarine lockouts to develop procedures and equipment.

He was an equipment designer for SEALAB II, worked on early saturation dives and participated in the first dives to over 1000 feet. He eventually participated in open sea working dives to over 1400 feet. Dick holds 12 patents for diving equipment, including the hot water suits and supporting systems.

MR. TORRANCE PARKER

As the founder of Parker Diving Services, Inc., Torrance has over 50 years of diving experience. A pioneer in the commercial diving industry, he has been involved in virtually every type of diving operation, using air, mixed gas, bell, manned submersible and ROVs. He has an extensive background in construction, maintenance and repair of various waterfront structures such as piers, docks, moorings, bridges, pipelines, outfalls and platforms.

Torrance carried out the first underwater NDT inspections with an audigage for the Long Beach Harbor Department in 1953. He developed and introduced the first powered brushing equipment for underwater hull and operated the first sub-sea television equipment in Los Angeles and Long Beach Harbors in 1962. He was Chief Inspector Diver for the City of Los Angeles during construction of Hyperion's No. 7 Ocean Outfall – the largest and deepest ocean outfall ever laid up to that time. He then served as Chief Inspector Diver on the Orange County Ocean Outfall No. 2, on the San Onofre Nuclear Generating Plants' 18-foot diameter intake and discharge lines during their installation, and numerous other pipeline projects off the California and South American coasts.

Torrance's underwater skills helped construct platform Hazel, California's first major drilling platform. He is qualified in advanced methods in underwater cutting and welding as well as underwater maintenance, repair, and salvage of engineered structures. He is also a qualified underwater marine surveyor of steel merchant ships, certified by Lloyds Register of Shipping and has performed surveys and repairs to over 2000 steel merchant ships.

Torrance Parker's technical knowledge, practical skill level and vast experience in the industry make him an invaluable resource for Parker Diving Services, Inc., where he continues to work as a consultant and manager of special projects.

MR. JACK REEDY

Jack was first exposed to diving in the limestone quarries in Illinois where he grew up. After graduating from high school he joined the U.S. Navy and volunteered for the Medical Department. After a few years he was selected, trained and authorized to practice medicine in the Navy, independent of a physician. Next, Jack volunteered for Deep Sea Diving School. After graduation as a Deep Sea Diving Medical Technician and 1st Class Diver, he was assigned to various Submarine Rescue ships and Submarines. Here he was selected and trained as an aquanaut in the SEALAB program. Jack served two tours at

the Experimental Diving Unit, making the first 600-foot saturation dive and the first dive in the Ocean Simulation Facility in Panama City, Florida. Jack was one of the authors of *The Unlimited Duration Saturation Diving Excursion Tables*.

After retirement from the Navy, Jack joined McDermott Diving and worked as an Offshore Diving Superintendent for several years before becoming the Diving Medical Officer. During this time he participated as a supervisor in Igloo 88, which was a saturation dive to 1800 feet in Aberdeen, Scotland at the National Hyperbaric Center. Jack then retired from McDermott Diving and joined Cal-Dive International as Vice President of Safety, Training, Human Resources and Security.

Jack became involved with the ADC Safety, Medical and Education committee during his time with McDermott & Cal-Dive. He went on to become chairman of that committee and served in that position for the next 15 years. He also served on the ADC Board of Directors for 14 years and served as its President for 3 terms. In 2001, Jack was awarded the Association of Diving Contractors International Safety Medical & Education committee's STAR award. He also chaired the committee that first compiled the *ADCI Consensus Standards for Safe Diving Practices*.



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April 28 - 30, 2006

Monterey Peninsula, California

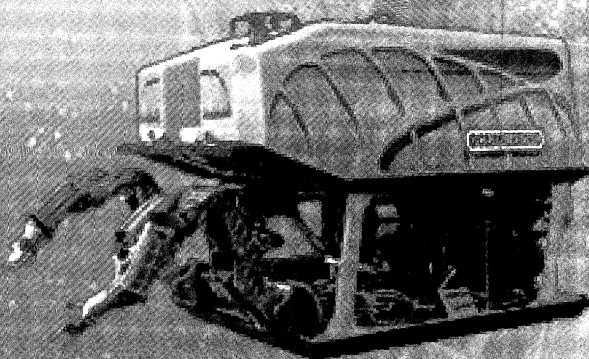
A three day symposium dedicated to the history and culture of abalone with presentations by diving historians from Japan and the U.S.A., including, Toshio Oba, Masaaki Yamaguchi, Yoshikazu Suzuki, Yoshio Ota, Roy Hattori, Tim Thomas, Sandy Lydon and Scrap Lundy. Diving demonstrations by a team of Ama divers from Minamiboso, Japan, opening of the Abalone Diving Exhibit at the Monterey Maritime Museum, and more. The HDS is supporting this unique event.

For more information contact
Tim Thomas, 831-372-2608 x 17, or
tim@montereyhistory.org
www.pacificcurrents.org



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HDS and DEMA

I was interested to read Ron Pavelka's letter in your last issue regarding DEMA. As a student of diving history myself with over 31 years in the diving business, I can appreciate the perception that Ron (and perhaps others) may have of the DEMA organization. In response to Ron's comments I will go on record saying that DEMA does, indeed support the Historical Diving Society in several ways.

Keeping in mind that DEMA is a non-profit organization itself, and that we too have a fiscal responsibility to our members, DEMA has attempted to help HDS by providing benefits that help them accomplish their goals while balancing DEMA's financial requirements of supporting the entire recreational diving industry.

As examples, HDS and other non-profit organizations have been extended a reduced rate to exhibit at the DEMA Show each year since 2003. For exhibit space alone, DEMA has provided financial support for the 2005 HDS exhibit equivalent to over \$3,000. DEMA has also provided free meeting space at the DEMA Show for such organizations as the Academy of Underwater Arts and Sciences (AUAS) each year since 2003. There are over 23 non-profit organizations that are provided with financial support at the DEMA Show alone, accounting for, at minimum, almost \$25,000 in financial support. The level of financial and exposure support provided by DEMA for HDS and other organizations is substantial.

In reading Ron's comments, it appears that it may also be important to remind readers that DEMA is not composed solely of manufacturers and that there have been changes in the structure of the DEMA Board. DEMA represents the *entire* diving industry through its well-structured Board of Directors. We represent the five major stakeholder groups, which, in addition to manufacturers, includes training and certification agencies, the media and associations, diving retailers and the destination/travel sector. In a decision made last year DEMA directors are now elected to three-year terms. The structure and goals of the DEMA office have also undergone significant changes in the last three years in recognition that DEMA must be a service-oriented organization that is fiscally responsible to its members and constituents. All of these point to the fact that DEMA does so much more than "investing hundreds of thousands of dollars in vertical industry publications while (they) wonder about their own history." Thanks for getting this out to your readers.

Best regards,

Tom Ingram
Executive Director
DEMA

Editor's note. Thank you Tom. As I noted in my comments in the last issue, Tom has brought a much-needed stability to the Executive Director post at DEMA. For the sake of our members who are not familiar with DEMA, let me echo Tom's statements that DEMA is a non-profit membership-based organization representing the interests of the recreational diving community. The HDS pays an annual membership fee of \$100 to DEMA and receives various DEMA benefits. As a non-profit, the HDS pays a reduced rate for a booth at the DEMA show, \$500 instead of \$1500. For the 2005 DEMA show, the HDS had three booths for a total of \$1500, which is \$3,000 less than the standard "for profit" booth price. This is the "financial support for the 2005 HDS exhibit equivalent to over \$3,000" that Tom is referring to. For the sake of clarity, if the HDS did not contract for a booth, DEMA would not provide one. HDS pays \$500 to "save" \$1000. In the not so distant past, DEMA did provide HDS with a courtesy booth, but their policy changed. Irrespective of the merits of this type of "paying for financial support," I do feel that Ron Pavelka's letter raises a much broader question regarding the "vision" that the DEMA Directors have of their organization's leadership role in this country, and the world in general.

The question to be asked is: "As America's national representative of the recreational diving industry, should actively supporting the preservation of that industry's history be part of DEMA's corporate culture?" For example, as the acknowledged leader in America's commercial diving industry, the Houston-based Association of Diving Contractors International, enthusiastically embraces that industry's history in its corporate culture, and actively supports it, financially and otherwise. Further examples of that type of leadership can be found throughout America's "for profit" and "non-profit" corporate ranks. Their participation, in what has been called "the moral fiber of American corporate culture," provides some of the means for our nation's industries and sports organizations to leave a historical legacy worthy of what our country now is; - the world's only super power.

Leslie Leaney

U.S.S. FALCON AND SQUALUS

I wish to thank you for sending me a copy of the Diving Log of U.S.S. FALCON, which covers the diving during the rescue and salvage of the U.S.S. SQUALUS. It is particularly meaningful to me, as I knew most of the people who participated. Dr. Behnke and his wife Ruth are well known to me. When we had our 50th Anniversary Memorial ser-

vice on May 23, 1989, I talked to Dr. Behnke on the telephone. He told me that he could not come from California to Portsmouth as he was in the final stages of decaying health. He gave me some messages to take to the service, which I passed on at the dinner that evening when I was given an opportunity to speak. I worked for the Falcon during the salvaging of the SQUALUS until we towed it into the Navy Yard. Swede Momsen was in charge of the operation.

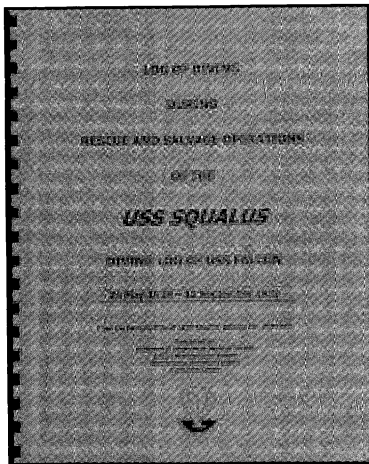
On August 28, 2004 I was in Panama City for the commissioning of the U.S.S. MOMSEN. Many of the Momsen family were there. Floyd Matthews was also there. Floyd served with Swede on the S-1 when Swede was CO, and again for three years on the S-4 after it was salvaged and made into an experimental ship for developing the Momsen Lung and rescue chamber. Floyd was a diver as well as a submarine sailor. I served with him in 1941 and 1942. He is 102 years old and quite mobile. Thank you again for the log. It will remain a prized possession.

Allen C. Bryson
Groton, Connecticut

Editor's note. We received Allen's letter last year and apologize for the delay in printing it. The Log of the U.S.S. Falcon is available from the HDS Book Store at www.hds.org.

CLUB ALPIN SOUS-MARIN

Reading again your comprehensive article on Cousteau in the *Historical Diver* #13, I noticed a reference on page 20 to the Club Alpin Sous-Marine formed in 1946. This took me back more than half a century to 1950 when, as secretary to the "Aberdeen Amphibians" Club, I wrote to M. Alexandre Barache President of the "Club de la Mer." You have to appreciate that we "Amphibians", who were struggling with the sub-arctic waters off Aberdeen, had little idea of what was going on in the south of France – apart from a photograph of the charming Mlle. Nelly Chenevée posing with her tiny version of the Cousteau-Gagnan Aqua-Lung, which along with her equally tiny mini-bikini bathing togs,



was an absolute revelation to our rough northern "Amphibian" perspective. I still treasure that photo as it encapsulates completely the wonderful divergence of sport diving from the military necessities of WW2. The following is a transcript of the letter for the historical record, -Typed on "Amphibians' Club" notepaper:

17th October 1950

M. Alexandre Barache, President, "Club de la Mer".

Dear Sir,

We were interested in an article by Mr. MacDonald Hastings, published recently in this country, dealing with the activities of your club. Although our pastimes include climbing, canoeing and ski-ing, our main interest lies in diving. Our club was formed in 1948 after several years of successful diving. Membership is restricted only by the lack of, and expense of, suitable equipment.

At first we used simple home-made helmets coupled to a hand pump and this served to give us experience in underwater exploration. Then, after seeing the wonderful film *Épaves*, by Jacques Y. Cousteau, we were inspired to try "free" diving. For this purpose I had bought a self-contained compressed air breathing apparatus in 1948 made by Messrs. Siebe Gorman & Co. of London. It operates on the same principle as the Cousteau-Gagnan apparatus, but has two 750 litre cylinders which allow the swimmer to stay at 13 metres for 40 minutes. We have also in use self-contained oxygen breathing sets and find them useful for shallow dives down to 10 metres. However, we greatly prefer the Cousteau-Gagnan type of apparatus. The North Sea is rather cold, 55 to 57 degrees F in summer, and we are compelled to wear tight fitting rubber suits. This tends to hamper our movements underwater, but rubber swim fins on our feet makes swimming quite easy.

We, like you, have made use of the harpoon gun, but fish here do not offer the same sport. Visibility varies and it is seldom possible to see more than 5 metres. We should like to know how you fill your air cylinders. Our air cylinders are filled by the British Oxygen Co. Ltd. to a pressure of 1800 lbs. per square inch.

At present we are experimenting with underwater photography and results are promising. We have recently overcome the difficulty in focusing caused by refraction, which was our first obstacle.

Another interesting development is that of communication underwater. With the old helmet this was quite easy as we could talk normally to each



Mlle. Nelly Chenevée with the Cousteau-Gagnan Aqua-Lung

other through telephone to the surface. However, with "free" swimming, complications arise. The formation of words, even with throat microphones, is almost impossible because of the rubber mouthpiece in use at present. Also we should like to dispense with the connecting wires between swimmers. The only other alternatives appear to be visual or acoustic signaling. At the moment we are considering the possibilities of sound producing devices operated by a trigger striking on a metal diaphragm. This could be mounted conveniently on the frame of one's breathing apparatus and would be heard over a wide area underwater. Perhaps you have done something to overcome this problem.

I am forwarding this letter to you through Mr. MacDonald Hastings as I do not know your address. We are keen to exchange ideas on diving and would like to know more about your activities.

Yours sincerely,
Ivor W. Howitt,
Secretary, Aberdeen Amphibians' Club.
Scotland

Well, I had no response to the above letter and so I did not include it in the Appendix of my book *Fathomeering – An Amphibian's Tale*. However I thought it might be of interest for HDS archives!

I have just read the wonderful biography of William Beebe by Carol Grant Gould and this gives me an insight into the difficulties of the fund raising required for his expeditions and his own health difficulties. I am fortunate to have an almost complete collection of his popular books as well as correspondence with both Beebe and his second wife Elswyth.

I am also fortunate to have an ongoing correspondence with Sylvia Munro, the daughter of John E. Williamson, who took the first ever-undersea movies from his "photosphere" in 1914 near Nassau in the Bahamas. Back in the 1940's never in my wildest dreams did I ever hope to have a friendship with Sylvia.

Well, Williamson, Beebe, Cousteau, Tailliez, Dumas and many of my friends from those early years have gone. My memories are revived by articles in the various Historical Diving Society magazines and for this I am grateful.

Keep up the good work,
Ivor Howitt
New Zealand

Editor's note. *The world of diving history eagerly awaits the publication of Ivor's book, which has been referenced many times in this and other international diving history publications.*

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HUNT FOR SCUBA REGULATORS IN PRAGUE

by Peter Katz

I came from Czechoslovakia where I started diving with a gas mask in 1956. Since 1968 up to 1979 I worked as R&D design engineer of diving equipment at AQUACENTRUM in Prague. I have designed regulators, dive helmets, deep-sea cameras, etc. In 1980 I immigrated to Australia and started to work for Sea Hornet (T.D.Preece Co.). In the last 23 years I designed all their regulators, cylinder valves and other high-pressure devices. Now I have semi-retired, so I have more time to play with my collection of regulators and write articles about their history.

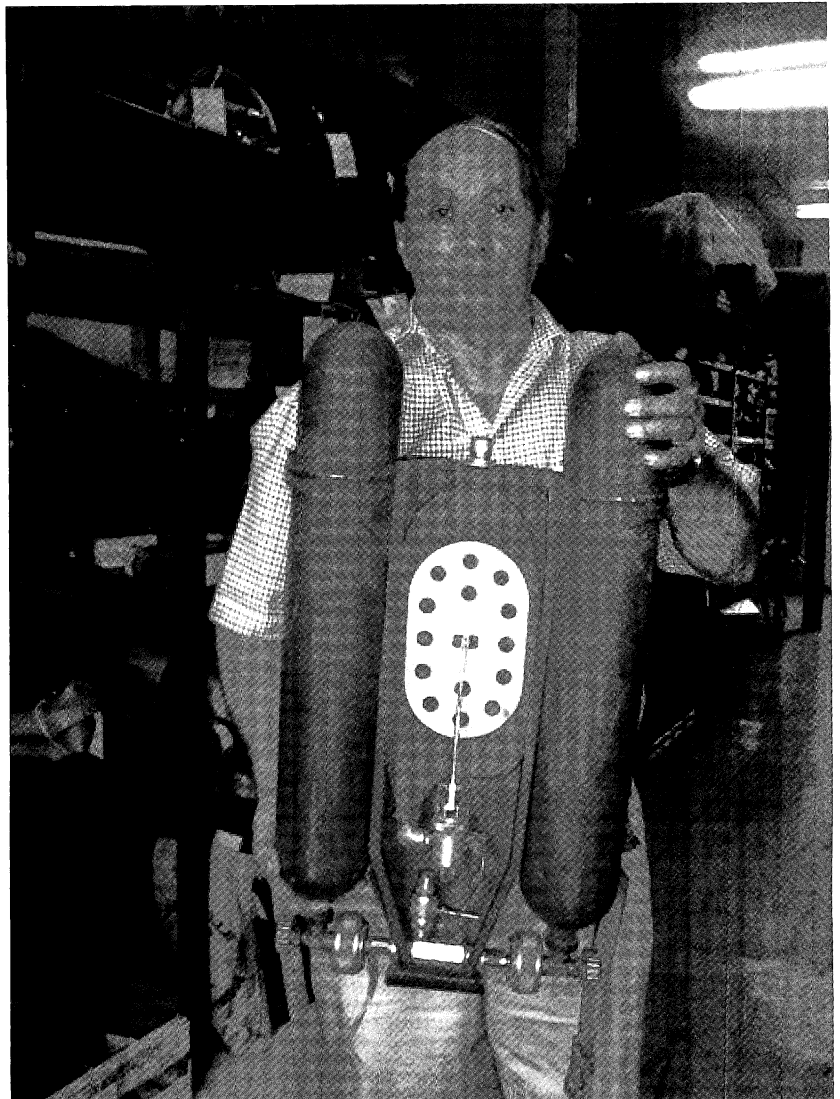
Recently, my collector's passion brought me to Prague in Czech Republic where I was born 67 years ago. I met my old friends (people with similar collector's sickness) and I was able to trade or buy some scuba regulators and other items from them. At this time I am trying to put together the history of production of scuba regulators in the Czech Republic and put it on CD. So my friends arranged my visit to the depository of the NTM (National Technical Museum). The museum does not have a permanent diving exhibition except for a few submersible chambers outside, and their depository is not accessible to public. Thanks to the understanding of my work, the General Manager of NTM allowed me to visit the depository and look around.

In the depository is a huge collection of diving equipment. They not only have scuba equipment but also hard hat gear, underwater scooters, cameras and many other items.

I was extremely and pleasantly surprised when I found a Commeinhes RC-35 breathing apparatus, which was probably never used. Custodians of the museum had no idea what it is and how and when it came to Czechoslovakia.

Among tens of scuba regulators from all over the world, I found the most interesting French CG-45 regulator and twin aluminum cylinders from La Spirotechnique dated 1948. And for the first time I saw two hose regulators from Poseidon. I didn't know that Poseidon ever produced this type regulator. It must be one of their oldest.

Another big surprise for me was that they have regulators that I designed and built around 1956. I had no idea that those dinosaurs from that time still exist. I hope that mankind will forgive me for all those products that are out there!!!



The author with an RC-35 Commeinhes breathing apparatus,

The Museum also has samples of some of my later regulator designs that went into mass production. Deep sea cameras that were used by our research institute, to locate manganese deposits, and that could operate at a depth of 5 kilometers, are also in the museum..

I would like to thank Josef Petrik and Josef Priplata from NTM who were very helpful with my research. These fine people are passionate about the protection and preservation of their diving history in this inland country.

When my plane took off from the Prague airport, my luggage was unusually heavy. Twelve old scuba regulators quietly accompanied me to their new home in Sydney.

In the News



© 2005 DEMA, by Alese & Morton Pechter.

Editor Leslie Leaney congratulates Nick Icorn on his Reaching Out Award.

Nick Icorn receives Reaching Out Award.

After a career in diving stretching back to 1948, Nick Icorn has added DEMA's Reaching Out Award to his list of acknowledgments. Members of the HDS have been supportive of Nick's formal nomination, which dates back to the early days of the Society. The Society's Nick Icorn Award was created in recognition of his outstanding contributions to preserving American diving history. Nick received his award from Tom Ingram at a packed DEMA Award's Party in Las Vegas, in October 2005. An overview of Nick's career appeared in HDM issue 44, page 11.

HDS Conference Committee Formed.

The Society has received requests to hold its annual Conference in many cities. To assist members wishing to bring the Society's Conference to their area, a Conference Committee has been formed. The Chairman of the HDS Conference Committee is Sid Macken who can be reached at moceonvideo@onlinemac.com. Currently HDS Conferences are set for Seattle in 2006 and Tarpon Springs in 2007. Details will appear in this magazine and at www.hds.org.

U.S. Navy Divers Reunion and Working Divers Conference.

Several groups of former U.S. Navy divers are planning to descend on San Diego, California for their reunion gatherings. The latest information we have is that the Navy Divers, HCU-1 and Divers Support Personnel will hold their reunion on May 7-11, 2006, at the Red Lion Hanalehi Hotel. A possible SEALAB Reunion is being considered for May 5-7 and the Working Diver Conference is set for May 8-12. Information is available from Dave Ball at david-ball@cox.net or Dave Peterson at speterson@chesapeake.net.

Military Divers and the Homeland Security Policy Institute Group.

The HDS has been assisting member Thomas Barnes at the Homeland Security Policy Institute (HSPIG), which has set both Military Diver's and Photographer's Forums. Incorporated into their website, these Forums offer former military divers a location to register their names and details on their careers, locations, reunions, etc. The Forum is searchable and allows a diver to locate an old buddy by duty station or name. The HDS and other dive groups are linked. Visit www.hspig.org.

A Wild Ride.

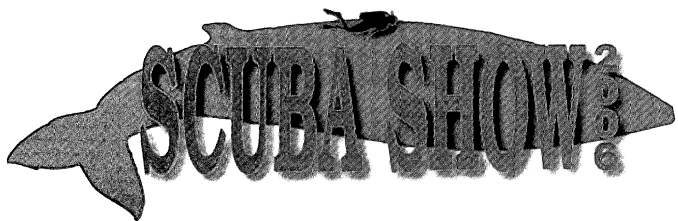
August 2005—A Lake Michigan diver, Joan Eddy, 40, was sucked into an 8-ft. wide intake pipe feeding the Consumers Energy power plant. Her half-mile ride ended in an open-air canal where plant workers found her. "Her only physical injury was a bloody nose, though we can imagine seven minutes of stark terror." A Consumers Energy's representative said: "Divers need to be aware of the area and avoid the pipe. It is a diver's responsibility to use all due caution whenever they dive near an intake for an industrial facility." The pipe had neither grates nor warning signs. From *Undercurrent* -- scuba consumer reporting since 1975. www.undercurrent.org

DEMA Show changes locations and timing through 2010.

The DEMA Board of Directors has announced the locations of future DEMA shows. A show rotation involving Las Vegas and Orlando was established beginning with the DEMA Show 2005 and running through 2010. Houston, Texas shows in 2007 and 2010 have been relocated. The new locations are Las Vegas for October 22-25, 2008, and October 20-23, 2010, and Orlando for November 8-11, 2006, October 31 - November 3, 2007 and November 4-7, 2009. Log onto www.demashow.org.

Commander Maurice Batterham.

Man Overboard is a documentary project about the life of Commander Maurice Batterham (1906-96). Batterham (Batts) served as Frogman with the Royal Navy during WWII and subsequently pioneered the Clearance Diving branch in the Royal Australian Navy. Towards the end of his career he worked with Ted Eldred on Porpoise technology in their Breathing Appliance Company. Any memories or information on Batterham from those who worked with or met him would be much appreciated. The documentary is currently being researched and developed by Anna Jeffries, Carmel McAloon and Nick Batterham (Maurice's grandson). Please email: nickbatterham@bigpond.com or annajeffries@bigpond.com. Or write to: Endangered Pictures, 1/179 Johnston Street, Fitzroy VIC 3065, Australia.



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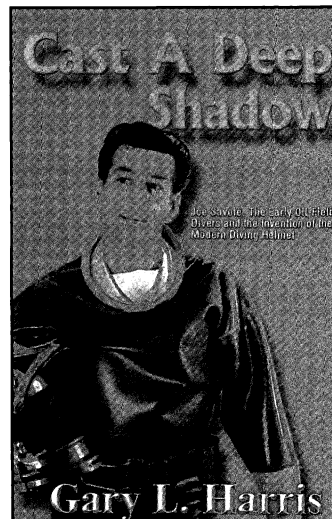
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Cast A Deep Shadow

**Joe Savoie, the Early Oil-Field Divers
 and the Invention of the Modern Diving
 Helmet**

By Gary L. Harris

The Joe Savoie story, with many photos from his career, including family, friends, and some of the divers using Savoie equipment. Also contains patent drawings and original adverts for Savoie equipment. Review will appear in next issue of *Historical Diver*. Limited publication of approximately 500 copies, which will sell out quickly.



Soft bound. 192 pages. Black and white photos, bibliography. \$16 plus \$ 5.50 domestic p&p. contact HDS office for overseas rates.

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1936, May 6th. Commandant Le Prieur, at bottom left, with a group of his scuba students at a pool training session at Pontoise-Saint-Germain, France. There are 24 students in the class of which approximately six, or 25%, appear to be female.

Photo courtesy L. Leaney

The First Recreational Diving Course?

HDS SEAP's Bob Ramsay recently sent an email to HDS groups requesting information on when the first recreational scuba diving course was conducted. HDS USA offered Commandant Le Prieur's scuba classes in Pontoise-Saint-Germain, France, in 1936, but Bob was looking for something connected with the demand equipment used today and not Le Prieur's free-flow units.

The class must be open to anyone, and designed to teach non-vocational, purely 'for fun' scuba dive training; to have had a written course plan; a plan that included formal theory sessions and practical in-water sessions; that it was an actual course and not just being shown how to dive with a friend.

Bob recognized the 1954 Los Angeles County course covered by Eric Hanauer in HDM #40. In Eric's book *Pioneers In Diving*, Andy Rechnitzer recalled the earlier program at Scripps Institution of Oceanography in La Jolla, California: *So it wasn't long before we started a training program. Interest was slow to build, and those*

first courses were almost private lessons....It wasn't until 1952 that we finally organized it into a written syllabus.

For training on the European side of the Atlantic Bob found a quote from HDS-UK's Reg Vallintine:

By 1953, however, the new mass-produced aqua-lungs, being produced by Siebe Gorman and Heinke were becoming slowly more affordable. Trevor Hampton, an ex-Wellington bomber and test pilot, bought one when he decided to become a marine surveyor and was soon inundated by potential pupils at his idyllic cottage at Warfleet Creek near Dartmouth. I did my first dives there at his 'British Underwater Centre' clad only in an old rugger shirt, which we were instructed to bring with us in his joining instructions. The 3-day course including use of equipment cost £5. We dived alone, initially with a line to the surface, and those of us who survived the cold became 'British Menfish', 'Mermaids' or 'Tadpoles' according to sex and age.

More information on Trevor Hampton's career can be found in HDM #16.

HDS Italia's Faustolo Rambelli sent the following contribution:

Dear Bob,

With reference to your question about recreational diving courses in Italia.

1. The first diving courses were organized by Luigi Ferraro in Elba Island in the summer of 1948.
2. During 1949 Luigi Ferraro organized the same courses in Ischia Island.
3. The following years Ferraro organized the courses on board of a vessel sailing between Italian islands. During this period Duilio Marcante (the father of the Cristo degli Abissi) worked with Luigi Ferraro.
4. During 1952 in Milano, Duilio Marcante carried out the first diving course in a swimming pool. In the same year in Genova there was the first course for diving firemen (Sommatori Vigili del Fuoco).

The above information is from the book Storia delle attività sportive subacquee [History of Recreational Diving Activity] in Italia, by Duilio Marcante.

Best regards,
Faustolo Rambelli HDS ITALIA

Editors note: Professor Luigi Ferraro is the recipient of the HDS USA's 2001 Historical Diver Magazine Pioneer Award. Details of his career may be found in

HDM #31. Among those countries not heard from are the French, who were diving recreationally with Scaphandre Autonome (Aqua-Lungs) right after WWII. The Aqua-Lung was not available in America until late 1948, so unless E.R. Cross at Sparling, Schenck & Kendall, James Lockwood or Jack Browne at Desco held some O2 rebreather classes, it would seem that Scripps and Los Angeles are the pioneers in the USA. If any members can add to this international information quest we would be happy to publish their contributions.

Leslie Leaney
Editor

1851 California Shipwreck

Laramie Bratcher is seeking information that adds to the narrative on page 28 of *Shipwrecks, Smugglers and Maritime Mysteries*, by Wheeler and Kallman, regarding a ship scuttled in 1851 near Richardson's Rock. The rock is named after Nathan Richardson, a survivor who took refuge there. Laramie wants information regarding the wreck being found and its name. "The gold stolen seems to be the basis for the Treasure of San Marcos Pass." Contact Laramie Bratcher, 145 Orange Avenue #10, Goleta, CA 93117, USA.

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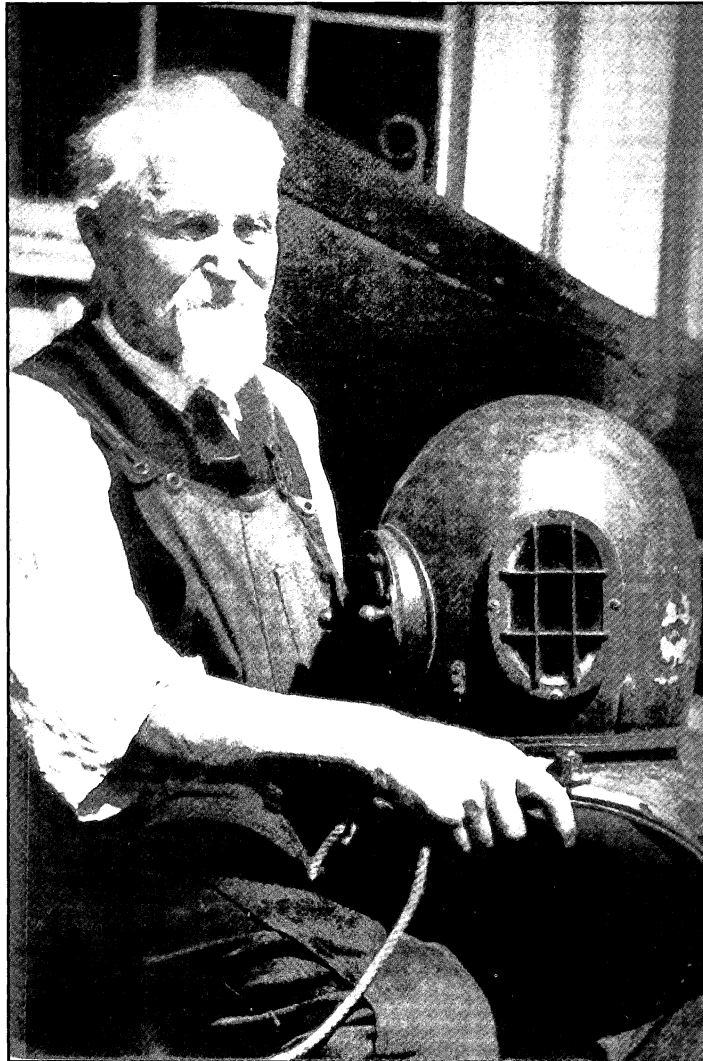
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Alfred Pahlberg

“Dean of all Deep Sea Divers in this Country”

Starting his career with Captain Thomas Scott in 1872, Swedish immigrant Alfred Pahlberg went on to earn the title, “Dean of all Deep Sea Divers.” His place in American diving history is interwoven with the rise of Merritt Chapman and Scott, and is also used as a source by Francis Hopkinson Smith in his 1898 book, Caleb West, Master Diver. At the time when the following interview took place, Pahlberg was 83 years old and had only stopped diving three years earlier. He was working in the company’s diving locker after a 56-year underwater career. See editor’s note at the end of this article. — Leslie Leaney



Alfred Pahlberg, Dean of all Deep Sea Divers. Pahlberg is shown with a three light Morse commercial diving helmet

Down in Davy Jones’s locker where the fishes play and the hungry sharks prowl round, where the waters, black as night, are swirled by the mighty currents of the tides; ten, fifteen fathoms below the surface in

the mud and silt of an oozy bottom—here is where Alfred Pahlberg has spent more time than any other man alive.

Countless times he has dropped down fifty feet to patch a gaping hole in a ship, rammed and sunk in the harbor; or to slip a chain round the hulk of a once sleek yacht, now buried in mud almost to the deck; or to grope in the slimy ooze, five feet deep, for a woman’s lost purse packed with money and jewels. He brings it up dripping with slime—but safe.

Hauled to the surface, he doesn’t feel like a hero. He isn’t a hero, he tells you. Jobs, the very thought of which would make us land lubbers sprout gray hairs, are all in the day’s work to Alfred Pahlberg, master diver.

Dean of all deep-sea divers in this country, perhaps in the world, Pahlberg has been diving for fifty-six years. Although he is now 83 years old, incredible as it may seem,

he took his last dive barely three years ago. He would probably be going down yet had not a member of the salvage concern for which he has worked almost a lifetime, Merritt - Chapman & Scott, chanced to remark: “It doesn’t seem right for a man to keep on diving.”

The idea that he was getting old hadn’t occurred to Pahlberg until his firm began “easing him off.” “After I was seventy they didn’t let me go down much,” he says. Even so, he went down from time to time until he was past eighty. Then he was put in charge of the costumes and equipment of the divers who succeeded him. “If he doesn’t know all there is to know about diving apparatus, who does?” asked the official who gave him the job.

In New London, Connecticut, where Pahlberg lives and plays cribbage in the evening, he is looked

upon as the outstanding survivor of an underseas epoch. Bright of eye and slight of build — much too slight, it is said, for his chosen profession — he is hailed as the king of all divers. He has outlived and outworked them all. He wrested his kingdom from stronger men and gave it up only because there is a limit to human endurance. His claim to royalty has been supported by no less authorities than United States Navy officials and marine insurance companies.

Other men have gone deeper than Pahlberg and stayed under water longer at one time. But the measure of a diver for all-round usefulness is not how far down he can go, nor how long he can stay, but what he accomplishes while there.

Most of us think of the diver as an emergency man. And he is. He plunges down to answer the SOS of a submarine, while the nation waits on the grisly news sent up

by his slender line. Or to rescue a fellow diver who has got his lines fouled. Quick! Quick! Or his air maybe shut off. But between emergencies is the constant daily routine that requires the diver to be, first of all, an under sea artisan. There are ships to be patched, pipe lines to be laid, sea walls to be built, channel obstructions to be blasted. Pahlberg can do all these things. He is carpenter, mason, pipe fitter, stone worker, master of many trades.

Hundreds of vessels that groaned in agony as their ribs scraped rocks and shoals from Nova Scotia to Key West owe their present usefulness to his skillful surgery. Alongside them, he was only a mole working in the darkness of muddy waters, but his hands were sure, and in time he set them free.

He is sorry his diving days are over, but he is a philosopher and does not lament. He is glad to be alive and well and still on the job in the office.

The Merritt-Chapman & Scott Corporation, with which Pahlberg's name is identified, is an outgrowth of the business built up by Captain Thomas A. Scott of New London, diver extraordinary and giant of the sea. Around the name of "Old Man Scott" are woven legends worthy of Conrad, and Pahlberg's association with him began sixty years ago. Cries of SOS were fainter and more difficult to answer then. Telegraph, telephone, and radio were either unheard of or only beginning. The Coast Guard did not exist. There were more wrecks then. Today everything has changed, except the hazards of the diver. The firm now has stations for wrecking and construction work up and down the east coast from New London to Key West, on the west coast, and in Jamaica, with a corps of divers at each station. But the trade is never overcrowded. Pahlberg, for many years the firm's star, is now its senior employee. He has outlived Old Man Scott by twenty years.

It was in the New London office of the firm I found him — a gentle, wiry little man with a halo of snow-white hair, a white beard like a sawed-off whisk-broom, twinkling blue eyes and a complexion like pink and white peppermint candy. In spite of his slender stature (he was undersized even in his prime) there is about him an air of wholesome ruggedness, bred of a lifetime of temperate habits. For fifty years he has not even used tobacco.

"I used to chew," he says, "until my wife complained it was a nuisance round the house. Then I took to smoking a pipe, until Old Man Scott got to saying, 'If you knew how that pipe stunk, Al, you'd quit it!' So I did."

A courteous, charming man. About him is a gracious simplicity peculiar to the truly great who do things without boasting.

Questioned about his experience, he is reluctant to talk. Nothing much ever happened, says this man who has seen sharks swim by and clambered over wrecks on the ocean's bottom where one false step meant death. His shrewd alertness belies the suspicion that anything is wrong with his

memory. He is living up to the code of the sea salvor which hates a braggart.

"Vell, yes," he says in the slow Swedish accent which persists after all these years, "I've worked among sharks, but they always found something better to eat than me. And, yes, I've had my air cut off, but I always got it again. And — vell, once I stayed down seven hours, but Captain Scott stayed down longer than that. He was finishing a job he couldn't leave. A man always likes to finish a job."

"How did you know when it was time to come up?" I asked him. Few divers stay down more than an hour at a time. Many work only in the forty minutes of slack water between tides twice a day.

"Vell," said the old man with a smile, "I always knew when I wanted my coffee."

Woe to the cook on the diving barge who didn't have a steaming pot of coffee when Al came to the surface! The favorite beverage of his homeland has carried him through many a tough job.

"What did you like best about diving?" I asked, still hoping to loosen his tongue.

The old man heisted; then his blue eyes twinkled. "Pay day," he replied.

So gradually, after much coaxing and questioning, the story came out.

Pahlberg was born in Sweden, as so many divers are. There is a tradition of the sea among the Scandinavian races; in some form or other it has long been their livelihood. As a lad of twenty he set sail first for France, thence for America in a full-rigged ship that took three weeks to cross the Atlantic.

"I intended to go back home again," he said, "but some of the boys on shore persuaded me to run away and we shipped on a schooner to Maine. Here I got a job on a little coastwise craft, the PEARL. We went down as far as Virginia, where we picked up a load of lumber for New York.

"That delivered, the skipper got the contract to go back to Maine and load a cargo of stones for the Brooklyn Bridge. But we never took on that cargo. We left New York in a blinding blizzard and got as far as Stepping Stone Lighthouse when another schooner rammed us and sank us in fifty feet of water. There were four of us in the crew. The mate and his brother were drowned. The captain and I hung on to the ice-coated boom until a schooner picked us up and brought us back to New York.

"With my ship on the bottom, I was out of a job. What was worse, I was out of funds; for there in the pocket of my store clothes, now also on the bottom, was \$200, all the money I had saved since I left Sweden. But believe it or not, when the ship was raised the money was still in that pocket. I had saved my neck and saved my funds, and I knew that I was lucky.

"The job of raising that ship was given to Old Man Scott; he was a young fellow then and he took me on as

a helper. He must have liked the cut of my jib, for he told me I might stay with him if I liked. I said to myself, 'It's a job and I'll take it, but I ain't going to stay with you long,' for I didn't care for him much at first. He was too bluff and hale and hearty, and I didn't understand his jokes. But I went back to New London with him. That was 1872. The longer I knew him the better I liked him, and he became my best friend in the world." It was during the building of Race Rock Lighthouse that the young Swede took his first dive. Race Rock, near the west end of Fishers Island, had long been a graveyard for ships. It lies at the point where Long Island Sound meets the Atlantic Ocean. In angry seas the tides sweep over it at terrific speed. The authorities had long desired to mark this point with a lighthouse, but to build one seemed a superhuman feat. At last, however, the government contract was given to the daring engineer Francis Hopkinson Smith, who was also an artist and a writer. The contract for the submarine work was given to Captain Scott.

Now began a battle with the sea that made engineering history. The laying of the foundation alone took three years. The top of the rock had to be cleaned off smooth and leveled by means of bowlders which weighed from five to seventeen tons each. The stones had to be shaped, conveyed to the rock, and lowered in chains under water, where they dovetailed together like wooden joints. Sheet-iron bands, three feet high, were lowered into place around them, bolted together, and filled with concrete poured below the surface. And so on, layer after layer, until the surface was reached.

Again and again angry seas swept away derricks, huts, everything man-made. The divers struggled against all odds which the elements could devise. F. Hopkinson Smith has immortalized the venture in his book, *Caleb West, Master Diver*. The character of Caleb is drawn from Captain Scott, and Pahlberg is one of the heroes.



The air-tight diving dress is blown out like a rubber tire. Alfred Pahlberg dressed in a Morse commercial rig. This, and the other photos of Pahlberg, are circa 1930, and probably taken at Merritt, Chapman & Scott's New London, Connecticut, headquarters. Pahlberg was in his early 80s and was then working in the company's diving locker after a 56-year diving career with the company. This photo has received more recent international exposure as one of the last two photos in the book, Helmets of the Deep, Leon Lyons, 1988, Hollywood, Florida.

"When the job started I was a surface man," says Pahlberg. "Captain Scott was doing most of the diving, assisted by his half-brother, a man too old and too slow for the work. One day the old man gave out and was hauled up exhausted. Skies were clear, seas favorable, and Scott anxious to push the job. He looked up from the prostrate diver and caught my eye.

"How about it, Al? Want to put on a suit?" To be truthful, it was the last thing I wanted to do. I was scared to death, but, with the Cap'n looking at me like that, 'All right,' I said half-heartedly. Once they'd strapped me into that air-tight contraption all blown up like a balloon with nothing but a tube to breathe through, only the thought of how the boys would guy me kept me from tearing it off. Next thing I knew I was under water jerking up signals to the tender."

Things went all right the first day, and the Captain praised the young man's work; but next day seas were rolling. Pahlberg, standing on the rock under only fourteen

feet of water, had just sent up the signal to lower a stone when a big swell lifted the derrick boat. The chain with the giant boat hook on the end of it came crashing down on his helmet and smashed the glass in the front of it. The blood spurted in his forehead and water poured into his suit. Yet, like a case-hardened diver, the young Swede held his breath while they hauled him to the surface. They rolled him over a barrel and shook out several quarts of salt water.

"How about it, Al?" said Captain Scott as the young man weakly opened his eyes. "Got your bellyful of diving, or do you want to go down again?"

"Vell, Captain," he said, "I tank I better have a coupla cups of coffee; then I'll go down and place that stone."

Then Old Man Scott knew he had found a diver. But even Scott did not know he had found the Neptune of divers, one who would keep on going down for hundreds—it may be thousands—of dives. The veteran has never counted

the times he has been lowered over the ship's bow. In his slow, modest way he confesses that for ten years his help was required on an average of thirty vessels a year in both northern and tropical waters, and that some of these dives took him down a hundred feet.

"But that's nothing," he says quietly. "I've heard of men who went down two hundred feet. I don't know how they did it. One hundred feet was deep enough for me."

At my request the old man led me to the small, outlying shed where is stored the diving equipment he now keeps spick-and-span for younger men. Suspended from the ceiling hangs a row of suits—great lanky, shapeless affairs like ghastly specters from another world; such things as Bluebeard's wife may have seen when she opened the forbidden closet. One look at them is suggestive of the dangers the diver is up against. They are gray, dull gray like the unexplored waters and as all-enveloping as a child's cold-weather sleeping garment. The old diver seemed dwarfed beside them. When I asked him to put one on, he shook his head; but to show good feeling he tucked his whiskers inside a helmet—and ceased to look like a human being. As he fingered the ungainly things lovingly, he explained their intricacies.

Next to his skin the diver wears two suits of woolen underwear of the good old red flannel variety. Body warmth must be conserved. The undersea man works in all seasons. Not long ago a pipe line three-quarters of a mile long was

laid in Lake Erie while parts of the lake were frozen under twenty-seven inches of ice. Next comes the clumsy waterproof suit made of rubber and cloth through many plies and a pair of ankle-length rubber boots with thick iron soles. The shoes weigh twenty-four pounds each and keep him feet downward in the water. Around his chest is strapped a band of iron weights, adding eighty pounds more. Over his shoulders is a corselet of metal rings to which his helmet is screwed. The helmet is metal with two thick glass eyes in front, through which he gropes for the light he seldom sees a few feet below the sunlit surface. Altogether the diving dress weighs close to two hundred pounds—an exhausting encumbrance on land but scarcely felt in the buoyant depths.

Air is pumped down to him through a rubber hose attached to the back of his helmet. It enters by a non-return safety valve which admits incoming air but stops any outgoing flow. But what is breathed in must be got rid of; so on the right side of his helmet is an automatic escape valve which allows the air to leave when the pressure inside the suit exceeds the water pressure without.

As the diver works below, the escaping air shows itself on the surface in a stream of bubbles. By these bubbles the tender, the diver's topside mate, keeps tab on his companion. If the diver is working away at ease, the bubbles come up steadily. If he is nervous, excited, struggling, the bubbles come in intermittent puffs—the tender's cue to grow un-



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easy and do something. Every diver has his tender, whose sole job it is to look after him, dress him, help lower him, maintain communication with him and see that he is hauled up in time. Incased in a little world all his own, the diver works below. Suppose the job assigned him is to examine and report on a wreck. He has only his sense of direction to guide him, and this must be uncannily sure. A sunken ship lying on one side is a topsy-turvy affair. Stairs don't run up and down but crosswise. Hatchways are higgledy-piggledy. Doors are not upright but sideways. To open one is like raising a dropped shelf. This crazy-quilt architecture he explores in the dark, and he must find his way out again by the route over which he came. One misstep and his lines are fouled. The slam of a door and his air is cut off.

Like a gnome he gropes in the blackness until he finds the jagged hole that has caused all the trouble. This he measures with his hands and arms—just how long it is, just how wide, just how thick by the thickness of his fingers. Stuck in his pocket may be a lath on which he nicks out the measurements. On the surface he draws a diagram of that hole. A patch is made to correspond, and when he carries it down to put it on he knows it will fit to a quarter of an inch.

"You couldn't tell Pahlberg's patching jobs from one made by an expert on land, in the light," said one of the men in his firm.

Usually he carries two tools in his pocket—a clasp knife with a ring in the end and an eight-pound hammer like a baby sledge, mere extensions of his sensitive fingers. Or the job may call for the oxyacetylene torch, a fantastic tool that reverses the landman's process and fights water with fire. It cuts through steel as a saw cuts wood. He may have to burn through the steel decks of a ship to the strong room, to recover valuable papers. Or perhaps the diver must guide a steam drill, a slender rod like a long pencil.

"We had a good wrecking job in Maine some years ago," said Mr. Pahlberg. "We had to blast out a ledge of rock to widen the channel of the Kennebec River. I drilled holes in the rock and put in dynamite in long cans, attached by wires to the boat. Then we set them off. The water shot up fifty or sixty feet in the air. Like Old Faithful geyser, I suppose, though I've never seen it. Yes, the water there was pretty cold, but if you work hard enough you keep warm."

To work at all in such conditions requires a sturdy physique and magnificent heart and lungs. No carousers or wasters need apply. The suit is rigid as a vise. The diver cannot turn his head without turning his entire body. He cannot lift his hand to his face or to any other part of his person. In any physical emergency, such as an attack of coughing or nausea, he would strangle before he could help himself. His sole link with the blessed air is the tender, truly his friend in need. Between the two a close friendship often grows.

"I had one tender ten years," said Pahlberg. "He had been a pearl diver down South, and when he got too old to dive he turned tender. He worked with me till he died.

His name was George Brown—a first-class man. And say, you should have seen him make the other men stand round when he wanted anything done! I felt safe with him, all right."

The diver has two connections with the tender—his air line, a rubber hose; and his life line, a rope. Nowadays there is also a telephone. Ear phones are inside the helmet; the transmitter is in front of the mouth, and the wires go up the life line to the tender.

"I dived for years without a telephone," says Pahlberg, "and even the modern diver depends on his life line for most of his communications. There is a code of signals by jerkings on the line almost as extensive as the telegraph code, which both diver and tender understand. In all there are more than fifty signals."

Two pulls means "More slack." Two pulls repeated again and again is an SOS, "I'm fouled; send help!" Three pulls means, "I'm coming up." Four, "Haul me up." The same signal may mean different things depending on circumstances. For instance, one pull by the diver may mean, "More air." One pull by the tender means, "Are you all right?" This time the diver's answer of one pull is, "Yes, all right." When derricks are used there is a new code of signals to distinguish between the use of the boom fall, the main fall, the side fall, the trimmers. One shake and a jerk; two jerks and a shake—it is a language all in itself which each one must know as he knows his name.

Once Pahlberg almost lost his life because a green tender misunderstood, but since it smacks of heroism he doesn't talk of it glibly. "Only my big feet saved me," he says. The story came out in fragments.

The once proud yacht *IOLANTHE* had sunk in Long Island Sound under 40 feet of water, and was buried almost to the deck in mud and silt, the backwash of the tides from farther out in the channel. Tons and tons of that shifting mire must be pumped away before Pahlberg could reach the nasty hole in her bottom. The intake hose from the suction pump, working on shore, was guzzling up mud like a giant boa constrictor—"swallowing the rabbit," they call it. As Pahlberg slogged round on the oozy bottom, suddenly his foot slipped and he tobogganed into the hole that was being torn in the ocean's floor. His left leg was jerked sideways and, with a shiver of pain, he realized his foot was caught in the intake.

"I should have been torn in two," he said, "except for the fact that my big iron shoe wouldn't go all the way into the pipe. Yet I couldn't pull it away. There I was, anchored to the intake as though I was nailed there. With my rope I jerked out the signal to stop the pump, but the tender was new and green. He mistook it for the signal to haul me up—the worst thing the boys could do. Their pull threw me off my balance; I fell with my weight on my left leg and I could feel the tendons snap and the bones of my ankle fly out of joint. Vell, yes, it hurt pretty bad but I held onto my rope

and jerked out again, 'Stop the pump.' This time Old Man Scott got the signal and the Old Man always understood. I wasn't much good when I got to the surface, but one of the boys picked me up and carried me over his shoulder to the hospital. No, it didn't lay me up very long."

"Ever had the 'bends'?" I asked him. The old diver shook his head. "Cap'n Scott once had a touch of them, and I had to finish the job alone. And once I worked over two other boys who had 'em—pretty bad. But myself, I've been Lucky."

"The bends," or caisson disease, is the malady caused by being hauled up too quickly after being far down for a long time. The victim suffers excruciating pains that bring on convulsions and may end, if not in death, in "diver's palsy," or paralysis for life. It is this which has caused the failure of many expeditions for sunken treasure. Vessels laden with cargoes of gold, unclaimed beneath fathoms of water, tempt the diver. Cupidity is stronger than fear. He goes after the prize and may bring it up—but at the expense of his life or his health. Many a diver has lived to curse the treasure that lured him down. Why is this true?

Nothing that the ingenuity of man has devised is as unnatural as the diver working in deep water. The sea imposes a crushing punishment on any land creature who entrusts his body to the deeps. Water is heavy. The deeper one goes, the heavier it is. For every two feet a man descends, the water pressure increases about a ton over the surface of his body. The diver 100 feet down must resist a weight of almost fifty tons.

This would crush him to a jelly were not his air-tight diving dress blown out like a rubber tire to withstand the weight of the column of water. It supports him just as a pneumatic tire supports a heavy car. The pressure from without and the pressure from within must be kept in equilibrium. As the diver goes deeper, the pressure in his suit must be increased, or the weight of the water will squeeze him to death.

If a diver, working on the deck of a sunken ship, slips and falls the twenty-odd feet to the ocean's floor, the additional ten tons of pressure will cause his suit to collapse, and he will be crushed to a pulp. Although no drop of water may have entered his lungs he is in diver's parlance



Pahlberg dressed in a Morse commercial rig. The diving dress weighs close to two hundred pounds.

"drowned." To exist at all, the diver must breathe air under heavy pressure. At the depth of 100 feet, the air fed to him is compressed to about one-fourth its normal volume. He is always working under forced draft, like a furnace fed only with oxygen. The excess oxygen consumes his tissues at a rate much more rapid than normal, and with overlong exposure creates an oxygen poisoning.

Yet it is not the oxygen, but the excess nitrogen that causes the "bends." Nitrogen is the inert component of the air; it forms about four-fifths of our atmosphere. Under normal conditions we exhale it with each breath we give off, but conditions change when the air is compressed. The nitrogen, instead of being exhaled, dissolves in the blood stream and remains there in solution. While under water, the diver notices nothing. It is when he rises that the trouble begins. As the water pressure is reduced, the

excess nitrogen bubbles out in the blood stream, clogs the arteries, and impedes circulation, causing extreme pain. If the bubbles gather in the spinal column they affect the nerve center and cause paralysis. No wonder the diver dreads the "bends!"

The first preventive is to bring him to the surface slowly—not in one long haul but in a series of short rises with a pause at each stage, to permit the nitrogen to escape gradually. Then no bubbles of great size can form. The period of decompression varies with the depth at which the diver has been working and the length of time he has been there. From an extreme depth of 200 feet, two hours is required for rising.

As a further preventive, government surgeons have experimented with feeding the diver an artificial atmosphere composed of oxygen and helium gas. The substitution of helium for nitrogen has been found to produce an atmosphere as respirable as that provided by nature. It lessens the hazards of caisson disease for the following reasons: helium is less soluble than nitrogen; it diffuses more rapidly in the body fluids and tissues and for this reason is eliminated more rapidly during decompression.

"Have you ever dived for sunken treasure?" I asked Mr. Pahlberg.

"Oh, yes, of course, when I was young. I suppose every diver has. But never on my own account. I was always too busy for that. It must be fifty years ago that a man from

Pennsylvania, a big, handsome, strapping fellow, claimed he had located the spot where Captain Kidd's treasure lay buried. He had with him a group of rangers who had charted off the area and they knew within two or three feet exactly where that fabled chest of gold lay. He wanted a hardy diver to go after it and came to me.

"The spot he had fixed upon was not far from Gardiner's Island. The reward, if I brought it up, was enough to dazzle any man. Even so, he paid me ten dollars a day while I worked for him—but all I found there was mud. He had other divers working for him, sometimes seven days a week. That venture must have cost him plenty! But was he discouraged? No sir-ee! When he left he told me he'd find it yet. Poor fellow—he was slightly crazy.

"I'll undertake to raise anything if I am sure it's there. A good tough rock, for instance—that's a nice job for a diver. Such a rock lay in the midst of one of the most valuable oyster beds in the country, just off New Haven, a big, ugly rock that was in everybody's way. I had been sent after it and was kneeling down slipping the hoisting chain under it, when a sharp piece of oyster shell ripped a hole four inches long in my suit. It was an old suit, anyway, and I'd been cautioned not to wear it; and now it filled up good and fast. They hauled me up with the rock still there. The owner of the oyster bed was pretty well discouraged, so after I'd had my coffee he came up to me and said, 'Look here, Al: if you bring up that rock I'll give you an extra ten-spot.' So right away I borrowed another suit, adjusted the chain and pulled it up."

"What did you do with the ten dollars?" "Treated the boys, of course." "Ever had any encounters with sharks?" "Vell, close enough," said the old diver. "It's funny," he added with a chuckle, "our closest meeting was right up here, where it's bitter cold. A coal barge had sunk just off-side Bridgeport and lay heaved over on one side. I wanted to see what the natural bottom of the ship looked like from the outside and was just letting myself down by the bow chain when I felt something grab my foot. I looked round to see a baby shark some four or five feet long so close we could have shaken hands. He'd seen me moving and was hungry, I guess, in those cold, lonesome waters. He must have been as scared as I was, for he swam away pretty fast. But I thought I'd better go up just the same. I knew the boys up top wouldn't believe me, but it happened I carried up unmistakable evidence of our meeting. On the iron sole of my shoe was the mark of his teeth, like a file. If he'd nipped me a few inches higher, I'd have left my whole foot with him. But it's down South where the sharks aren't lonesome. There you see them by the hundreds and so close you get to know their faces."

"When was this?" "Let's see"—puckering his brows. "It must be twenty-five years ago, right after the Florida hurricane. I'd been given the job to raise a schooner off Key West. We were working just off the course followed by the

cattle boats from the Gulf ports on their way to Europe. By the time these boats get as far as Key West, a good many of the steers are dead, and in times of strong currents every dead steer tossed overboard came floating right over the job. That was a banquet for sharks. They gathered for it as though for a family reunion. At first it made me a little nervous, but I soon learned that a shark prefers a good steer to a diver. They didn't bother us at all."

But sharks are only a part of the story of that job down near Key West. How Pahlberg, a diver from New London, chanced to be away down there, was told me by a man in the office who had tipped me off in advance with the warning, "Al never tells any story that reflects credit on himself."

The story starts in the North and goes back to August, 1905, when the United States ship NERO was wrecked off the south side of Block Island. Wreckers say Block Island must have been named from the blocks of jagged granite that line the floor off her coast. The NERO didn't have much bottom left when the seas had done their work. But Pahlberg went into the dark hull of that ship and placed bag after bag of cement until the sunken craft had a new bottom almost four feet thick. Then she was pumped out and floated. Uncle Sam was pleased, and one more notable job was credited to the Swedish diver.

The next month, the Pensacola hurricane played havoc with shipping and towns. More than fifty ships were foundered or driven ashore in that big blow. Among them was a valuable gunboat which went on the rocks and sank just outside Pensacola harbor. One Navy diver after another went down, took one look at the nasty gashes in her hull where the bowlders had stuck their teeth — and gave her up as a bad job. But Uncle Sam doesn't give up valuable property like that without a struggle. Navy folks at Washington scratched their heads — and suddenly remembered the NERO and the patching job done on her by that diver — "Let's see, what was his name?"

The result was a telegram from a high ranking naval official to Captain Scott;

"Can you send the diver who patched the NERO to Pensacola to-day?"

Pahlberg took the next train south. When the gunboat had been mended, he was dispatched to the rescue of the little schooner sunk near Key West. The only comment I could draw from him on the Pensacola job was:

"It was nice diving down there. The water was clear and warm, and the bottom clean. But I think work in cold water is healthier. Once off the coast of Maine I ran into a great nest of eels. They came up and ate out my hands like chickens."

What landlubber would make pets of eels?

But while the old case-hardened diver remains silent over stories of heroism, he loves to tell those that involve a joke. Here is a real fish story.

"Now and then we had a little fun under water, when we weren't too busy," he said. "We had a cook on the diving barge who spent every free moment fishing. He never had much luck, so we loved to kid him. Once I bet him a quarter I could catch a fish before he did. We shook hands on that bet, and I took a piece of meat down with me. I practically stuck the hook in the mouth of the first fish I saw swimming by. It was too easy and I knew it. Then I picked up a piece of iron from the wreck weighing about eight pounds, tied a rope round it and carefully hung it on old Dutchy's hook. Meanwhile I sent my own fish up to the surface on a line.

"When Dutchy started hauling in his line he thought he'd caught a whale. But it takes a lot of good nature to laugh at a trick like that. The coffee he gave me when I came up was weak and not very hot."

Stories like this are fast dimming in the memory of accumulated years. Pahlberg is the dean of divers, but his underwater work is done. He has an hour or so in the office every day, friends among the younger men, and in the evening cribbage or checkers. No, life is not over yet. And many a time when cries of distress are heard and there's skillful diving to be done, the wrecking crews would be glad to wrap a helmet around Neptune's whiskers.

The End.

Editors note. *This article was published in the New York Herald Tribune Magazine under the title of "Down In Davy Jones's Locker." The publication date is uncertain, but probably from the late 1920s or early 1930s. It was republished under the same title in Margaret Norris's book Heroes and Hazards, The Junior Literary Guild, New York, February, 1932.*

Article transcribed by David Goulard.

Alfred Pahlberg's career is directly connected to, or referenced in, the following historical diving titles:

Caleb West, Master Diver, by F. Hopkinson Smith, 1898, Houghton and Mifflin & Co., Boston and New York.

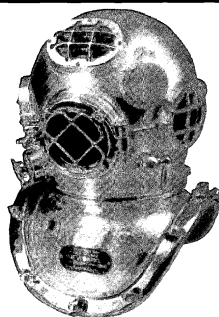
Captain Thomas A. Scott: Master Diver, by F. Hopkinson Smith, 1908, The Beacon Press, Boston.

Up For Air, by Frank Meier, 1940, E.P. Dutton & Co. New York.

20,000 Jobs Under the Sea, Torrance Parker, 1997, Sub-Sea Archives, Palos Verdes Peninsular, California.

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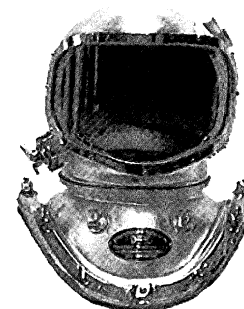
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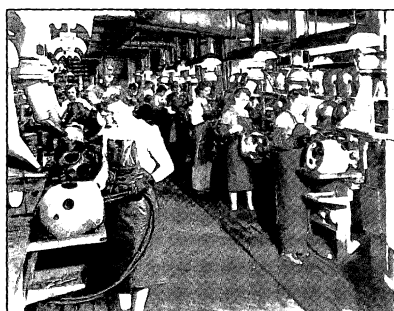
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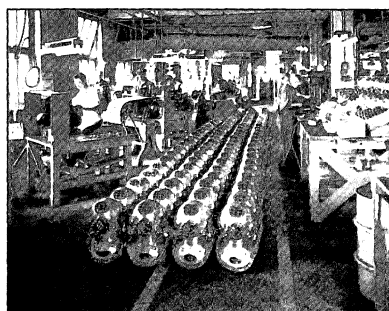
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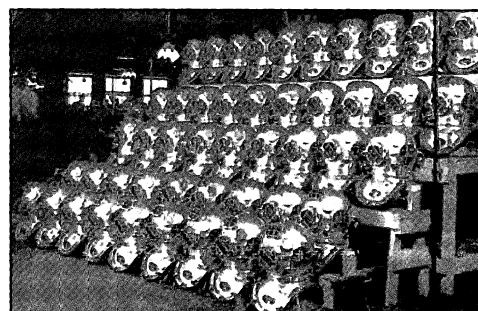
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Dr. Andy Rechnitzer
HDS-USA Advisory Board
By
Edward C. Cargile

We recently lost one of the true pioneers of diving, deep submergence and ocean sciences. Dr. Andreas "Andy" Rechnitzer passed away on August 22, 2005. After 36 days in the hospital, Andy succumbed to respiratory failure. He was 80 years old.

Andy was one of the pioneers of diving and of the Historical Diving Society – USA and began helping and supporting Leslie Leaney from the first conception of the American Society. Because of his vast wealth of first-hand knowledge about diving, Andy became a member of the Board of Advisors for HDS. For many years, Andy provided a wide spectrum of historical information and counsel to Leslie and the HDS Board in general.

Born and raised in the small farming community of Escondido, California (near San Diego), Andy Rechnitzer started his undersea exploration at a young age, free diving in 1942 off La Jolla and in Mexico. During college in World War II, he was commissioned as an Ensign in the U.S. Navy in 1945. After the war, Andy continued his education, earning a B.S. Degree from Michigan State (1947), an M.S. Degree from UCLA (1951) and a Ph.D. from Scripps Institution of Oceanography (1956).

While working toward their doctorate degrees at Scripps, Andy and good friend Connie Limbaugh developed many scientific diving techniques and safety standards. In 1951 Rechnitzer and Limbaugh co-authored the *Diving Training and Field Procedures Syllabus*. This was the predecessor of all sport diving instruction manuals.

Cdr. Doug Fane was Commanding Officer of the U.S. Navy Underwater Demolition Team (UDT) in



Dr. Andy Rechnitzer

Coronado, across the bay from San Diego. Cdr. Fane provided his expertise, considerable diving equipment and vessels to the small group of scientific divers at Scripps. In 1953, the Los Angeles County Parks and Recreation Department recognized the growing interest in Sport Scuba Diving. Al Tillman and Bev Morgan came to Scripps to be trained in scuba diving by Rechnitzer and Limbaugh. As a result, Tillman and Morgan began the Los Angeles County Underwater Instructors Program in 1954. This was the first recreational scuba diving instructor program in the U.S.

In 1960 Tillman was instrumental in the formation of the National Association of Underwater Instructors (NAUI). Dr. Rechnitzer was a prominent instructor at the first NAUI UICC in Houston, Texas, during 1960. He also earned his NAUI Instructor Certificate, #57. Dick Long and other diving legends were in that first NAUI instructor class.

After graduating from Scripps in 1956, Andy became the Deep Submergence Research Program Coordinator and Oceanographer at the Naval Electronics Laboratory (NEL) in San Diego in 1957. The Office of Naval Research (ONR) selected Andy to be on the Evaluation Committee for use of the deep research bathyscaph TRIESTE. Dr. Rechnitzer made several dives in TRIESTE in the Mediterranean Sea. ONR bought Trieste and assigned the bathyscaph to NEL. Andy became the Scientist-In-Charge and Program Manager of Trieste, and assembled an impressive team for TRIESTE: Lt. Don Walsh, Lt. Larry Shumaker, Master Chief John Michel and others. This team modified the bathyscaph



Atop Trieste, Lt. Larry Shumaker, Lt. Don Walsh, Dr. Andy Rechnitzer and Jacques Piccard.

and made progressively deeper dives, and Andy set a world record of 18,105 feet in 1959.

On January 23, 1960, Andy supervised the TRIESTE Team when they made the record historic deep dive to 35,800 feet off Guam in the Marianas Trench. Operating TRIESTE were Lt. Walsh and Jacques Piccard (son of the TRIESTE inventor). Don Walsh went on to earn a Ph.D. in Oceanography from Texas A&M University and retired from the U.S. Navy with the rank of Captain. Dr. Walsh is now President of International Maritime Incorporated. According to Dr. Walsh, originally he and Andy were scheduled to make the historic deep dive. This was the plan presented to the Chief of Naval Operations by Lt. Walsh for approval. But Jacques Piccard invoked his contractual clause with ONR that stipulated that he would make any unusual dives. All of the dives in TRIESTE were "unusual." Cdr. Larry Shumaker confirmed this point. Andy Rechnitzer never mentioned this in public.

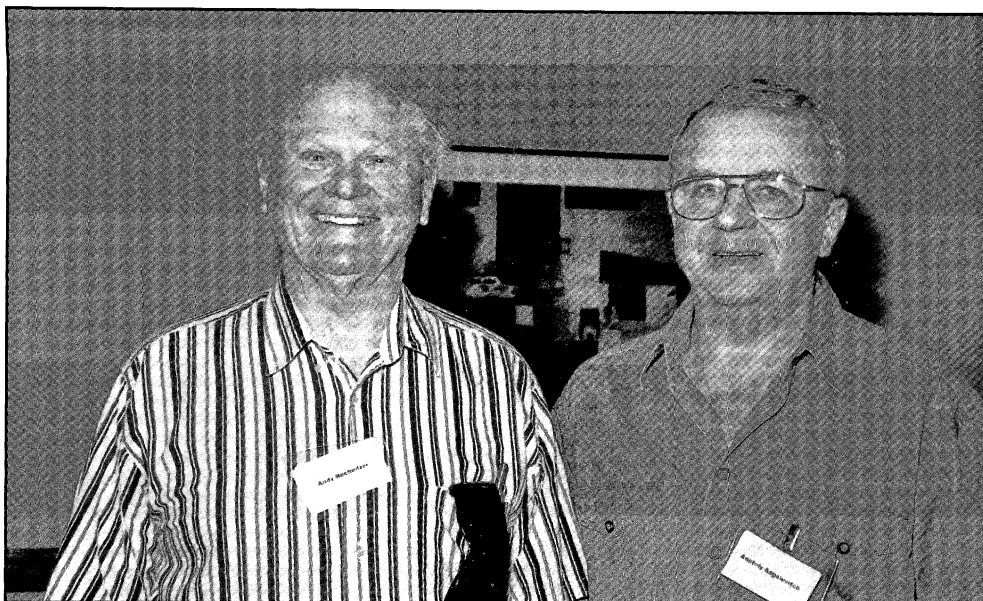
While at NEL, Andy was also one of the founders and President of Scientific Diving Consultants in San Diego. This group of ocean scientists and specialized divers included Connie Limbaugh, Dr. Wheeler North, Jim Stewart, Earl Murray, Emil Habeker, Ron Church and Chuck Nicklin. All of these individuals became leaders in the ocean community.

In 1963, Andy took his expertise in ocean science and technology to North American Aviation (which evolved into Rockwell International). He became Director of Ocean Sciences. At the time, I was an En-

gineering Supervisor in the Space Division of Rockwell and Diving Officer for the corporation. In 1964, I transferred to the new Ocean Systems Operations Division, and began working for Andy in Ocean Sciences as pilot, lockout diver and diving officer on the deep submersible, BEAVER IV. Later, I became Project Engineer and Program Manager of several ocean equipment development projects for Andy at Rockwell International.

Also working in the Ocean Sciences under Andy were Tony Christianson (designer of the Scubapro MK 7 and MK 10 regulators) and Bob Ballard (who led the team that discovered the TITANIC). They both later earned their Ph.D. Degrees. Don Crowell was the underwater still photographer on BEAVER IV and other ocean projects. Bob Dingman and Ralph White were underwater cinematographers on most of these ocean research projects for Rockwell International. Andy was the key visionary and a big promoter of BEAVER IV.

BEAVER IV was a unique and revolutionary deep submersible. The submersible could operate down to 2,000 feet and lockout divers to 1,000 feet. The lockout divers wore mixed-gas rigs, breathing mixtures of helium and oxygen. Through a joint-venture with Mobil Oil, the BEAVER IV could mate with ocean-bottom oil completion structures and transfer engineers down to 2,000 feet. The advanced manipulators on the front of BEAVER IV allowed all types of work to be done by the deep submersible. BEAVER IV was a prototype for the Deep Submergence Rescue Vehicle (DSRV) and the



Dr. Andy Rechnitzer and Professor Anatoly Sagalevitch from the Russian Academy of Sciences.

Advanced SEAL Delivery System (ASDS). BEAVER IV conducted many classified projects.

In 1970, Andy began a 15-year employment with the U.S. Navy in Washington, D.C. He was Senior Civilian Science and Technology Advisor to four successive Oceanographers of the Navy. When I was the first Program Manager of the NAUI Diving Association (NDA) and Editor/Publisher of *Diving World Magazine* in the early 1970s, Andy was a major help in providing technical and scientific expertise. His expertise was in marine biology, oceanography, deep submersibles and diving.

During the early 1970s, NAUI was led by several remarkable individuals. Dr. Glen Egstrom was President and Larry Cushman was Vice President. The Board consisted of Mark Flahan, John Resech, Dr. Lee Summers and others. The NAUI daily operations were conducted by Art Ullrich (Executive Director); Dennis Graver (Special Projects Director); Jon Hardy (Technical Director) and myself. The NAUI Advisory Board was very impressive. Andy was a leader and was most supportive, making several presentations himself at many of the conferences.

In 1974 Andy was part of the U.S.S. MONITOR Validation Team. As an Expedition Leader and President of CEDAM International, he participated in several expeditions and underwater archaeology discoveries, also making dives under both the Arctic and Antarctic ice packs. He was on numerous ocean research expeditions to Monterey Canyon, Lake Baikal in the U.S.S.R., and other locations.

His lifetime of sharing included being head of several technical conferences. After 31 years in the U.S. Navy Reserves, Andy retired in 1986 with the rank of Captain. He was also very involved in underwater film

production and film festivals, winning many awards. In 2002 Andy and I were co-producers of a one-hour television special on the TRIESTE for The History Channel, called *The Deepest Dive*. A prolific writer, Andy wrote numerous scientific papers and articles about work in the ocean.

He was very active in several professional organizations, including the Historical Diving Society – USA, Deep Submersible Pilots Association, the Marine Technology Society, the Academy of Underwater Arts and Sciences, the Congressional Underwater Explorers Club, and others. His professional expertise included serving on several Boards of Directors and Boards of Advisors, including International Underwater Contractors, the Historic Diving Society – USA, the NAUI Board of Advisors (1960-1990).

During his distinguished career, Andy was honored with many awards, including The Distinguished Civilian Service Award (the highest civilian award) presented by President Eisenhower at the White House; the Historical Diver Magazine Pioneer Award; three NOGI Awards; The Roger Revelle Award; Honorary Life Membership in the National Geographic Society; the Lockheed Award for Ocean Science and Technology; the Lowell Award from the Explorers Club; SSI Platinum Pro 5000 Diver; induction into the International Scuba Diving Hall of Fame, plus numerous underwater film awards and many other awards and honors.

With the passing of Dr. Andreas B. Rechnitzer, we all lost a very good friend and sincere man. He was a champion of diving safety and the use of ocean technology to carry on the important work under the seas and ocean science research. He often said, "If it isn't written, it isn't history." That was one of his prime mo-

tivations for working with the Historical Diving Society.

Over the last 41 years, Andy and I were associates on many other projects together. Andy wrote a great Foreword to my book, *Pioneers In Diving*. He was a good friend and a mentor to me.

Andy's long-time wife (Martha J. Mitchell) was tragically lost to cancer. Several years later Andy became re-acquainted with another friend from his high school days (Alice Stange), whom he later married.

Andy is survived by the Rechnitzer Family of wife Alice Rechnitzer, 4 children, 9 grandchildren and 1 great-grandchild. Kevin Hardy (a Senior Engineer at Scripps) arranged for and was MC of a Memorial Service for Dr. Rechnitzer at Scripps Institution of Oceanography on October 23, 2005.

Many of the Rechnitzer Family members have seen only the tip of the iceberg of how Andy affected so many of our lives. We can remedy that situation through the following.

I am developing an Electronic Scrapbook about Andy's life. It contains numerous letters and photos from Andy's friends and colleagues around the world.

You can contribute to this Scrapbook by sending letters about experiences or special remembrances you had with Andy. You can also write about how Andy

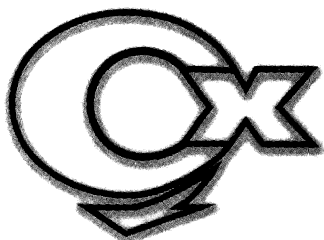
affected your life, even if you never met him. Write the letter as if you are talking to the Rechnitzer Family. Include photos you may have of Andy.

I will scan the letters and photos for inclusion in the Scrapbook. Send letters and photos to ecargile@cox.net.

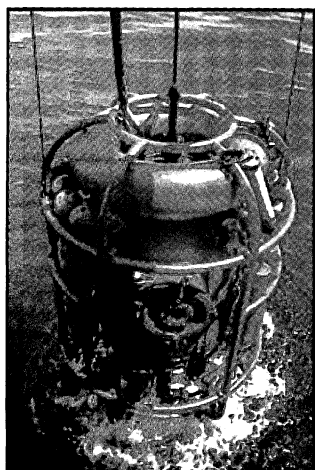
Copies of the Scrapbook will be presented to the Rechnitzer Family. CD-ROMs of the Scrapbook will also be available for friends by contacting me.

For the last nine years I worked closely with Andy and his many friends on a biography about his life. The book, titled *The Diving Scientist*, will be out early next year. The book chronicles the scientific and technical knowledge of Andy Rechnitzer, and his remarkable activities. The last part of the book is something that Andy did not even realize about himself ... the natural personal qualities of his life. He walked his talk and was genuine. The book will inspire you to do your own thing.

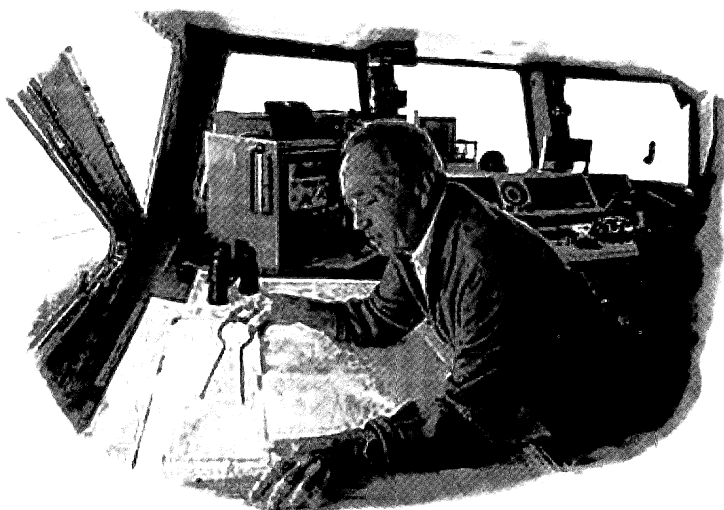
It is hard to say goodbye to Andy. But we can all remember with a smile the remarkable contributions of Dr. Andy Rechnitzer — The Diving Scientist.



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Book Review

U. S. Navy Diver: Performance Under Pressure

By Mark V. Lonsdale

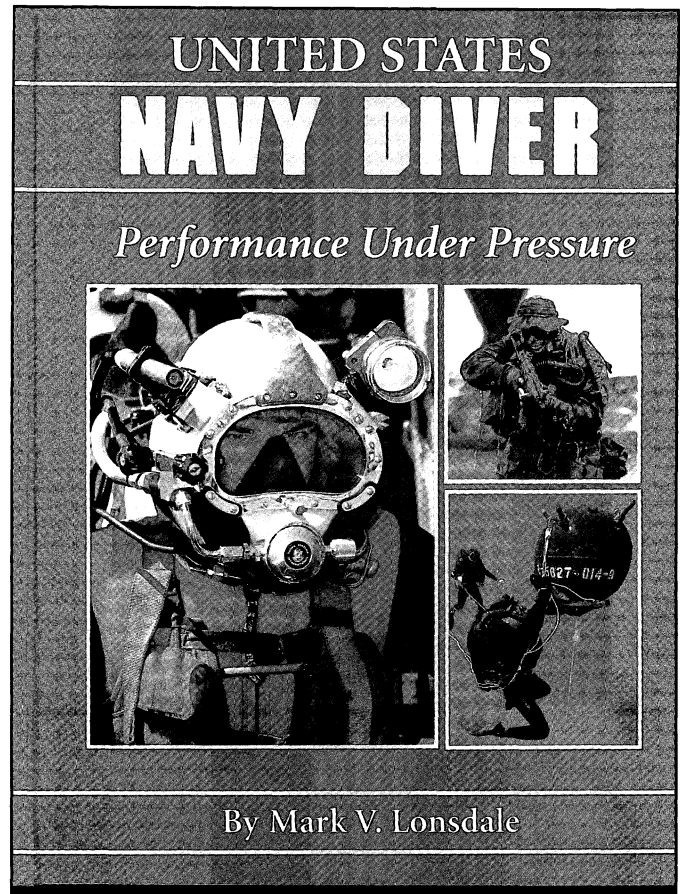
Reviewed by Nyle Monday

The first response of most HDS members upon seeing a copy of this handsome volume will no doubt be, "Why hasn't anyone done this before?" Indeed, for a subject so near and dear to the hearts of so many members, it is amazing that no one had really produced a book like this. Delayed it may have been, but most readers will find the result was worth the wait. Best Publishing has produced some fine pictorial works in the past, but this volume surely sets a new standard.

This fascinating book contains twenty-two chapters, beginning with a brief time line of Navy diving history sections on the Supervisor of Salvage & Diving, Navy diver rates, classifications and equipment. They are followed by chapters on the various major units and activities of naval divers today. Even the Marines and the Army find a place in this volume! The text itself is succinct, giving the essential information on each topic without going into great detail but augmented with a fantastic collection of color photographs which are a main attraction of this book. Quite a few of the individuals pictured in this volume are actually named and no doubt past and present members of the Navy diving community will come across many familiar faces.

Though the photographs are wonderful, one of the most interesting aspects of this fine volume (to this reviewer, at least) is its coverage of the various types of diving units. The better known organizations, such as the Experimental Diving Unit and the two Mobile Diving and Salvage Units, are naturally covered in detail, but so too are lesser known (even shadowy) units like the Marine Mammal Systems and the Submarine Development Groups. Space is devoted not only to salvage and ship husbandry tasks, the bread and butter of Navy diving operations, but also to activities as varied as the recovery of the *EHIME MARU*, the salvage of the *MONITOR* and the secret wiretap missions which were first revealed in the book *Blind Man's Buff*.

This reviewer would like to have seen more information on the history of diving in the Navy, but that was actually beyond the scope that the author set for this book, which was to document U.S. Navy diving as it exists today. Rather than an academic study, he has provided us with an exciting pictorial work on a group of individuals who made and continue to make a major contribution to our national security but whose work is generally unseen and whose praises often go unsung. The author has thoughtfully provided endnotes after each chapter in



which he cites his sources of information, including web-sites, where more specific information might be found, but in some cases more complete citations would have been appreciated.

The book itself is a finely produced publication. It is hard bound in about 8 1/2" x 11" and contains 346 well-illustrated pages in glossy, heavy weight, paper. Virtually every page contains two or more excellent color photographs illustrating divers at work. The photography in this volume is wonderful and depicts Navy divers working at almost every conceivable task, as well as fine photos of equipment, personalities, t-shirts, insignia and training certificates. The large size, slick paper format makes it a great coffee table book and one that everyone with an interest in military and naval diving will want to own.

\$29.95 plus \$9.50. domestic p&p. CA residents add 7.75% sales tax. Contact the HDS office at 805-934-1660 or hds@hds.org for overseas shipping.

Historical Books and Publications

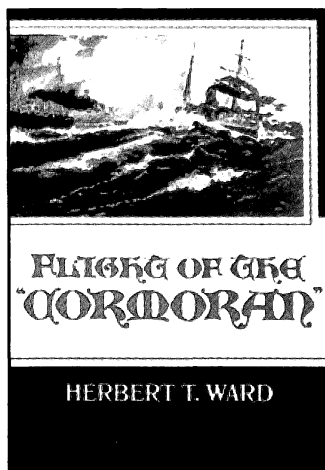
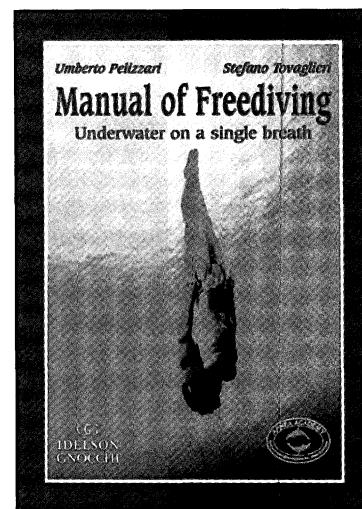
Some descriptions from press releases

The History of Ice Diving in Antarctica.

Authored by Peter Brueggeman of Scripps Institute of Oceanography, this paper details the first diving operations under the ice in Antarctica. Covers operations in the 1963/1964 season and other early facets of ice diving. Russian diving, lake diving and rare photos of divers underwater are included. Peter informed us of this paper last year but it was lost in the shuffle at the old HDS office, so our apologies to him. Access this report at <http://repositories.cdlib.org/sio/techreport/22/>

Manual of Freediving. Underwater on a Single Breath.

By Umberto Pelizzari and Stefano Tovaglieri. The manual is based on research and teachings developed at Umberto Pelizzari's Apnea Academy and on the techniques perfected by the predecessors of the world's best free divers, like Jacques Mayol. The manual contains different breathing techniques including selected yoga exercises. It is not one-dimensional but provides innovative learning practices that improve anyone's skills in the water. There is an 18-page chapter on the history of Apnea. Published by Idelson-Gnocchi. ISBN 1928649270. For more information contact candotti@worldnet.att.net or idelgno@tin.it.



Flight of the Cormoran.

By Herbert T. Ward. In May of this year the History Channel aired a segment of *Deep Sea Detectives* titled "Graveyard of Ships." This told the story of the Cormoran, a WWI ship that was brought to life in the book *Flight of the Cormoran*. Gina Ward-Anderson, daughter of the author, has printed a limited edition of the original book. A German Navy web site describes the vessel history as follows. "The former Russian steamer RIASAN was captured by the small cruiser EMDEN on 04.08.1914. Sent to Tsingtau, the ship was renamed the CORMORAN and equipped with the guns from the old gunboat CORMORAN. Ordered to operate in the South Pacific, the ship had no success in attacking allied ships. Because of coal shortages, it went to Guam and was interned by the U.S. When the U.S. entered the war, the ship was scuttled after a fight with American troops on 07.04.1917." Information is available at info@smscormoran.com.

Shipwrecks! The Great Lakes and Beyond.

By Cris Kohl and Joan Forsberg. A newsletter published by two HDS members through Seawolf Communications, Inc. The content focuses on the Great Lakes, but includes other areas. The Spring 2005 issue covers topics such as the Boston Sea Rovers clinic, U.S.S. MONITOR, EMPRESS OF IRELAND, North America, Amelia Earhart, Wreck Diving Magazine, Bob Ballard, Chicago Maritime Festival, the Whaleback METEOR, and more. Contact SeawolfRex@aol.com

Down To The Sea: 75 years of Ocean Research, Education and Exploration at the Woods Hole Oceanographic Institution. (WHOI)

By Vicky Cullen, who has been writing and editing for WHOI since 1973. Available from www.whoi.edu/75th/book/index.html or by calling 508-289-2719.





HISTORICAL DIVING SOCIETY U.S.A.



The scrambling about over the summer months to try and straighten everything out from the move of the HDS USA's offices to Santa Maria has taken a toll on lost time and scattered materials. The two major goals of fall 2005 were to prepare for the DEMA show and our annual HDS Conference. The third goal was to produce this issue of *Historical Diver*.

However, the first two goals were preceded by the Army Corps of Engineers Conference in Portland, Oregon, held from August 30 through September 1. Conference organizer Don Hibbs had included the HDS in his planning from the outset, and several members participated in this "military" event. Bob Kirby gave a presentation on his career and promoted his book, *Deep Sea Divers Wear Dresses*, Steve Barsky delivered his presentation on Diving in Polluted Waters, and HDS's northwestern representative, Sid Macken, spoke on the diving history of the Pacific Northwest. The HDS booth was staffed by Sid, Bob Kirby, Dennis Johnson, Brian Chad, and Joe Olsen, and attracted a lot of attention from the Army, Navy, and Corps of Engineers divers in attendance. Actually, the HDS was the only booth with any displays. The only other vendors at the conference were Seabotix and Video Ray!

DEMA Las Vegas seemed subdued when compared to previous years, but was a lot better than last year's disaster in Houston. However, several vendors located near us reported record sales. HDS SEAP's Bob Ramsay flew in from Adelaide, Australia, to attend various seminars while Jill Leaney, Kent Rockwell, and Greg Platt shared booth duties. Of considerable interest were the half dozen vintage helmets on display at the rear of the booth. These drew a lot of attention, particularly, it seemed, from foreign visitors. We were given business cards from Mexico, Germany, Russia, Italy, and Canada. Several HDS members cheered on Nick Icorn as he received his long overdue DEMA Reaching Out Award at the DEMA party.



*Sid Macken, Bob Kirby, Dennis Johnson,
Brian Chad, and Joe Olsen*

The party was a boisterous affair with Las Vegas styled entertainment by a new cast of characters emulating the famed Rat Pack of Sinatra, Martin, and Davis. At the Academy of Underwater Arts and Sciences Gala, Henri Delauze's NOGI Award for Distinguished Service was received on Henri's behalf by HDS Executive Director Leslie Leaney, and Stan Waterman and Sylvia Earle received the Wyland Icon Awards on behalf of Hans and Lotte Hass. DEMA is always a good place to

get in touch with old contacts and the 2005 was no exception. The HDS has a growing number of U.S. Navy friends and we are preparing future articles on various military subjects. We've even had interest from U.S.N. personnel stationed at the Office of Naval Research. Those people value their nation's history and we look forward to working with them.

After DEMA we packed and headed early to Tarpon Springs, Florida for our annual conference. The Tarpon Springs Conference was a real winner and will be reported extensively in the next issue. Suffice to say that we had a great time and I think our hosts, the Greek community of Tarpon, had even a better time. To quote an 86-year-old lady on the boardwalk, "Of course we speak Vintage Diving here! What else is there?" Members were made welcome everywhere they went and some even managed to get out on a working sponge boat for a surface supplied hooka dive. Everyone involved seemed to feel that the whole event was a success and plans are already underway to return for the 2007 Conference.

The 2006 Conference is to be held in the Seattle, Washington, area and those plans are moving well along thanks to Sid Macken's efforts. Look for the announcement in our next issue. Unfortunately, we missed our third goal which was the timely production of this issue, but hope the information we have provided has made this issue worth the wait.

Kent Rockwell.

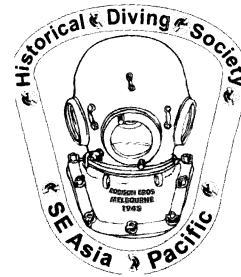
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HISTORICAL DIVING SOCIETY SOUTH EAST ASIA PACIFIC

**HDS SEAP has been quite active in
several projects scheduled for 2006**



HDS SEAP has several projects scheduled for 2006.

THE ADEX SHOW in Singapore has offered a large exhibition space for the Society to place a display. The Diving History Exhibit will especially cover re-breather technology. HDS SEAP has also been honored to be invited to be involved in two wonderful days of Dive Tek @ ADEX Seminar. HDS thanks ADEX for their kind support of the Society.

Dive Tek @ ADEX has Dr. Phil Nuytten, President HDS Canada, attending and presenting. Also presenting are Kevin Denlay (HDS SEAP) and Dr. Bill Hamilton (HDS USA). The show is an event not to be missed.

We extend an invitation to any HDS SEAP, or indeed any HDS member Worldwide who will be attending ADEX: Let us know, in advance, so that you can be included in the full program, including at least one special social event arranged for HDS members only.

Asia Dive Expo, held from 21-23 April 2006 in Suntec Singapore, expects to welcome 150 exhibiting companies and 10,000 visitors. For more information on Dive Tek @ ADEX, please visit www.asiadiveexpo.com.

OZTeK06. In Australia, HDS SEAP had been provided with exhibition space at OZTeK06 scheduled for Melbourne. Unfortunately this event has been cancelled. The HDS thanks the event organizers, Richard Taylor and David Strike (HDS SEAP members) for their generous support to HDS SEAP. Catch you guys in 2007, all the very best for that event.

HDS SEAP ANNUAL RALLY will be in Melbourne in September 2006 (actual date to be announced). If you wish to be placed on the contact list for this event, with no obligation, then please send an email from the www.hdsseap page or one to bob@hyperbarichealth.com, or by phoning the HDS SEAP office. +61 (0)8 8558 2970, or faxing +61 (0)8 8558 3490.

The HDS SEAP www.hdsseap.org is being rejuvenated, and soon the new web site will offer a chat line for Members Only. All current HDS SEAP members will be able to chat about your special interest area, be it helmets, scuba, books or videos, etc. This interactive media has been a long time is coming, and the Society apologizes for this delay, but reminds all Members that no one gets paid, everything is voluntary. So if you have any wishes or skills that you wish to support the HDS SEAP with, The Board urges you to please get in touch.

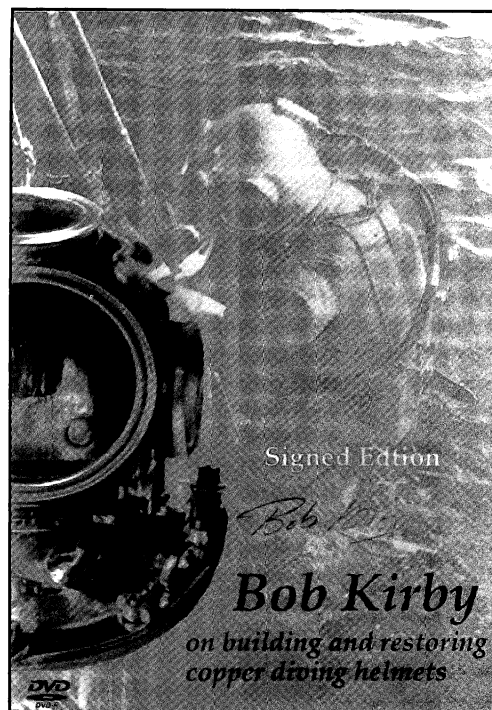
“Build Your Own Helmet” Workshop. Finally a very special event in 2007. Bob and Claudia Kirby will be hosting a “Build Your Own Helmet” workshop in South Australia. It is not just a matter of turning up, there is a cost (hey you get your own hand made helmet!) and there is some trade craft skills that will need to be learned before you attend, so this allows time for you to acquire them, if you do not already have them. That is the main reason why there is over 12 months lead time. It is limited to two groups, of a max of 5 persons. Interested? Then get your registration with no obligation at this stage, ASAP to the HDS SEAP office. Spending 5 days with Bob and Claudia is well worth registration, this is a one off very, very special event.

Bob Kirby, on building and restoring copper diving helmets

A DVD showing the legendary Bob Kirby converting a Chinese TF12 helmet to a Kirby-style air hat. As one of the greatest "metal benders" to work in the commercial diving industry, Bob Kirby and his partner Bev Morgan developed what many divers consider the ultimate heavy gear helmet: the Kirby Morgan air hat. During the 1960s it became the standard by which all commercial heavy gear was measured and was faithfully copied in Japan and marketed as the Yokohama air hat.

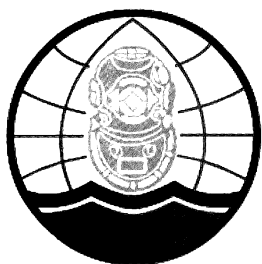
In this historical DVD, Kirby takes a small group of HDS members through the stages of converting a stock Chinese 12-bolt into a lightweight Kirby air hat. The program is filled with Bob's wit and his expertise in metal working. Bob also covers the tools, material, machining, and pattern making he employs. The DVD contains 16 chapters and runs 1 hour and 41 minutes, about the length of a feature film.

Bob Kirby is a member of the Commercial Diving Hall of Fame and a former Director of the HDS. His life story was published in his autobiography, *Hard Hat Divers Wear Dresses*, available from the HDS.



This special edition DVD is produced by Mocean Video for HDS USA and HDS Canada. It is limited to 100 numbered copies, all of which are signed by Bob Kirby.

\$35, plus \$5.50 domestic p&p. CA residents add 7.75% sales tax. Contact HDS office for overseas rates.



GLOBAL

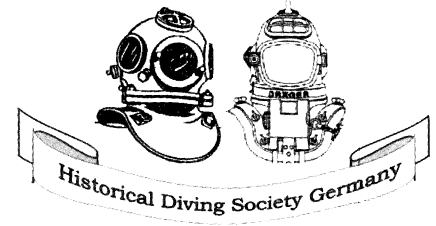
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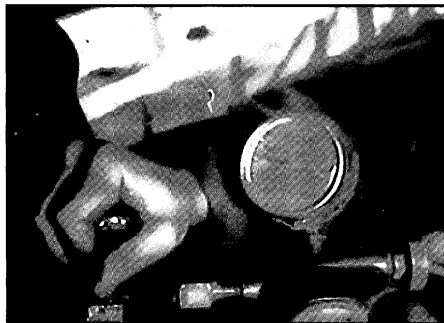
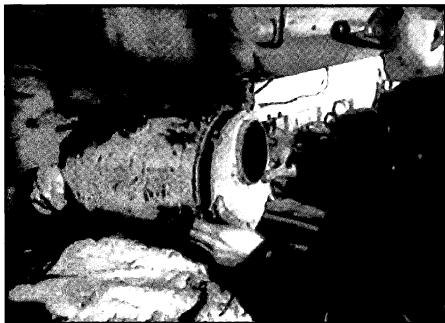
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Historic early Cousteau film found in Germany



During my research for my documentary film about the German frogman in WWII, which aired on German TV on November 30, 2005, I found in the German National Archive in Berlin an unknown, short film clip about the early film production of Jacques-Yves Cousteau in southern France. The clip was made by a German “Kriegsberichterstatter” (a reporter for news on the battlefields) in late 1943, as Cousteau worked on his second film, *Epaves*. It was planned to show this clip during a “Wochenschau”. This was a weekly, 20-minute long news show, with different themes ranging from culture, sport, battlefield action, but primarily the work of National Socialist party. The “Wochenschau” was screened in the cinemas before the main feature movie.

I enclose some still screen shots of the film to show its content. The film clip is only 60 seconds long and shows Frederic Dumas wearing the new Aqua-Lung. The three medium sized cylinders of compressed air are shown on

Dumas’ back, and also the regulator in its quadrangular box with the two hoses joining a metal mouthpiece.

Dumas is also shown walking like Charlie Chaplin as he crosses the ship’s deck with fins on his feet, then entering the water, and diving on the wreck of the sunken British steamer DALTON, laying in 20 meters of water.

The clip also shows Cousteau helping Dumas put the Aqua Lung and his mask on, and with his early camera housing. The narrator states that “A diver near the French Mediterranean coast makes himself ready for the dive. He is equipped with a new diving gear which allows him to dive without a helmet and heavy shoes. The film camera in his watertight case is now also ready for the dive. This wreck was never visited before.”

Michael Jung

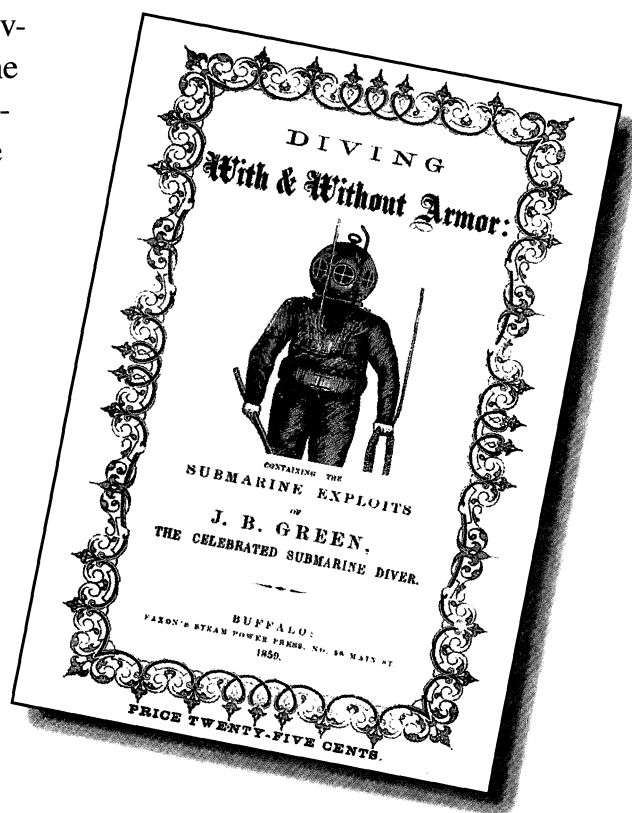
© Photos: Michael Jung

Diving With & Without Armor: Containing The Submarine Exploits of J. B. Green, The Celebrated Submarine Diver

This is one of the earliest accounts of helmet diving in America to be written by a diver, if not the first. The book chronicles J.B. Green's life as a "submarine diver." Crippled by the bends at age 29, he was forced to sell his memoirs on street corners for 25 cents a copy in an effort to provide for himself. Johnny writes an interesting tale of his life's adventures, including diving for gold on the wreck of the ATLANTIC in 150 feet of water in the 1850s.

This book has been meticulously reproduced by Sea Pearls from an original copy of this rare title. It is un-edited and appears solely in its original form. It has been reproduced in a limited printing, and all copies have been donated to the HDS to assist with the Society's educational mission.

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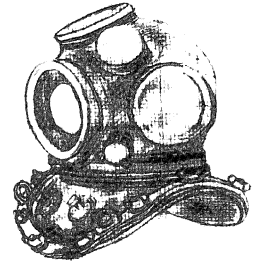
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HISTORICAL DIVER Volume 13, Issue 4, Number 45

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Morse Helmet #6363 History

HDS-Canada member Dave Carr has traced the interesting history of his Morse four light commercial helmet. The story stretches back to Newfoundland, Canada, in the 1940's and Carr was fortunate enough to correspond with and meet a former diver of the helmet.

The Find

I bought the helmet in 2004, and from Morse Diving, found that the helmet, #6363, had been sold to the Canadian National Railway (CN), Newfoundland, on May 26, 1949. I posted a question to a Newfoundland Railway chat site, on the internet, and someone knew that Fred Chancey had been a diver for the CN. I then simply looked up Fred in the phone book, wrote him a letter and followed that up with a phone call. He clearly recalled helmet 6363 and told me about an old newspaper article in which he was pictured using the helmet. I received a copy of the article from a public library but the picture was fuzzy, so I contacted *The Telegram*. They said those old photos were gone, however, three months later the fellow from *The Telegram* e-mailed me to say he had stumbled upon the old negatives. I ordered a copy and the helmet was certainly 6363, with its unique round top light and oversized telephone cup. The round top light is described in the ledger that Morse sent me for my records.

I called Fred again and asked if he would be interested in writing down some of his experiences. He was thrilled with the request so we made plans to meet up and review his memories. I brought 6363 with me and he recognised it right away. Here's part of what Fred wrote:

The Helmet

U.K. fleet's highliner tows 'hard luck' ship here

[illegible]

Clipping from The Evening Telegram, Tuesday, April 20, 1965 (Vol. 87, No. 77) showing Fred Chancey on the ladder wearing Morse helmet 6363 at the CN Dockyard.

*Reprinted with permission from The
Telegram, St. John's, Newfoundland.*



Close-up of image from The Evening Telegram , Tuesday, April 20, 1965.

I received your letter seeking information about the diving helmet in your possession. There is no doubt that this is one of the helmets that I used from 1954 to 1974 at the Newfoundland Dockyard. You noted that the manufacturer said that this helmet was sold to the Canadian National Railway in Harbour Grace on May 26th, 1949. The Canadian National Dockyard did not have an office in Harbour Grace so it was most likely sold to the Canadian National Railway "Newfoundland Dockyard" in St. John's. That would have been only two months after Newfoundland joined Canada and the dockyard was taken over by Canadian National.

The helmet, serial number 6363, was part of the Dockyard's diving equipment in 1954. I know this because the serial number was the same as the street address of my old house. The working history of the helmet began in 1949 and ended in 1974, the last year a hardhat diver worked in the yard. It was in storage until around 1980. My guess is that it changed hands a couple of times over the years, eventually finding its way out of Newfoundland to you. In my opinion it is unlikely that it has been used since 1974.

How I Started Diving

I entered into service with the Newfoundland Railway (who owned the Newfoundland Dockyard) in 1942 as an apprentice shipwright. Hardhat divers were selected from this group of workers. Divers still performed the same duties as shipwrights, but were called upon to do the diving when it was required.

In 1954, I was asked if I wanted to take over the diving duties for D. Smith who was soon to retire. I agreed and was sent to the CN doctor for a

medical. After receiving medical clearance, Mr. Smith took me down in St. John's harbour on my first dive. That was the full extent of the training I received and for the next few months I went with him on the diving jobs. I always had my gear with me, but he always found a reason for me not to go down with him. On September 9, 1954, Mr. Smith was on holiday and the Spanish trawler SANTA RITA came into St. John's with rudder trouble. I was asked if I would make an examination of the rudder and propeller. This was my first time doing any kind of job underwater. After falling off the ladder and then making a number of attempts to climb up the propeller, I was eventually able to give them a report that the lower spindle was 3/8" slack on the after side and tight on the forward side. It turned out that the report I gave was right on the mark and the vessel went on the dry dock to have a new bushing installed on the rudder shaft.

Hard Hat Diving Work at the Dockyard

As I mentioned, divers at the dockyard were selected from the shipwright's group and in my case, being a time-served shipwright, I only had to adjust to applying my trade underwater. The diving crews of the '40s to '70s consisted of a hard hat diver, his tender, two men to man the pumps, and two men to drag along a steel ladder which the diver would stand on to perform inspections or work. When a ship was damaged or went aground, the diving crew was called out to do a survey and assess the damage. On many occasions when the diver made repairs to make the ship watertight, boilermakers would make steel boxes on the inside that were filled with cement to seal the hole. They also made cofferdams to fit the contours of the hull based on measurements or templates provided by the diver. These steel boxes were bolted to the outside of the hull. Most of the cofferdams were small and fit over the damage so repairs were made from the inside. I can remember one that Diver Smith put in place that was so big when it was pumped out, a crew of boilermakers were able to go inside the cofferdam and make permanent repairs to the ship's hull while she lay afloat in St. John's harbour.



HDS-Canada member Dave Carr (left) and former diver Fred Chancey with Morse #6363.

old pipe and get the boilermakers to make a flange about 8 inches wide. One end of the flange would be attached to the strainer and the other end would have holes bored in it to suit the holes on the pipe. The flange was made by the dockyard boiler shop and fitted perfectly. The strainer was then attached to the old water main. The strainer was about four feet above the bottom of the lake and I had to build up a cradle for it to rest on. I stowed 350 sacks of cement under the pipe and when this hardened it served as a perfect cradle.

The dockyard diving crews were very busy in the '40s, '50s, '60s and early '70s because there were no roads across the island until 1965 and most communities had to be served by rail or water. All the shipping around the island, combined with the hundreds of fishing trawlers from Spain, Portugal, Russia, England and other countries coming into St. John's and other ports, kept the dockyard very busy. We regularly had to deal with ships with fouled and damaged propellers, rudder trouble, leaking rivets, and hull damage. In addition to working on the coastal boats that sailed around the island,



Fred Chancey reunited with Morse #6363 after 30 years.

we worked on such diverse projects as railway bridges, coastal piers, fore bays for the paper companies, water mains across Placentia gut, and construction of a concrete pipeline for a power company. We also installed new strainers for the water supply for St. John's, helped to install the new slipway in Clarendville, and worked with McNamara construction in St. George's on a new pier for the gypsum plant.

When a ship ran aground or was damaged, it had to be reported and a diving crew from the dockyard and a surveyor from Lloyds were dispatched to make an underwater exami-

nation before the ship could continue her run. This was compulsory when a ship was carrying passengers.

When we left St. John's for a diving job, we would have to go by train to places like Port-aux-Basques, which was about a 30-hour run. If a ship was damaged in Grand Bank on the south coast of the island, we would leave St. John's and travel to Argentia by train and joins the SS HOME or the SS BAR HAVEN to get to Grand Bank, stopping at all the ports along the way. It would take a week to make the trip and return. These days a drive to Grand Bank takes about four hours.

With the coming of confederation [when Newfoundland joined Canada in 1949 - ed.], most communities in Newfoundland were gradually connected by a road system or were resettled into larger communities. As a result, shipping around the province dropped off dramatically and by 1974 the glory days of the hard hat diver came to an end. The diving gear was stored in the diving room for a number of years when CN received a request to donate a suit to a museum. I was instructed to give one each to the Transportation Museum and the Marine Institute in St. John's and one to the Fisherman's Museum in Grand Bank. The superintendent of the yard told me to keep one for myself. The foreman came one day and asked how much diving gear we had left. I told him we had one full set packed in a sea chest that we used outside the dock. When we opened the box we discovered that




*Dave Carr dives Morse #6363
at a WEG outing in October 2004*

someone had cut the 150 feet of hose and removed the helmet. I told the foreman that I would know the helmet if I ever saw it again because the serial number on it was 6363.

I could go on and on. There are many stories pertaining to the hard hat divers in Newfoundland. This has brought back a lot of good memories of days gone by, and of people who are no longer with us. I hope I have given you a better idea about our work and how we performed it.

Fred Chancey, 2005

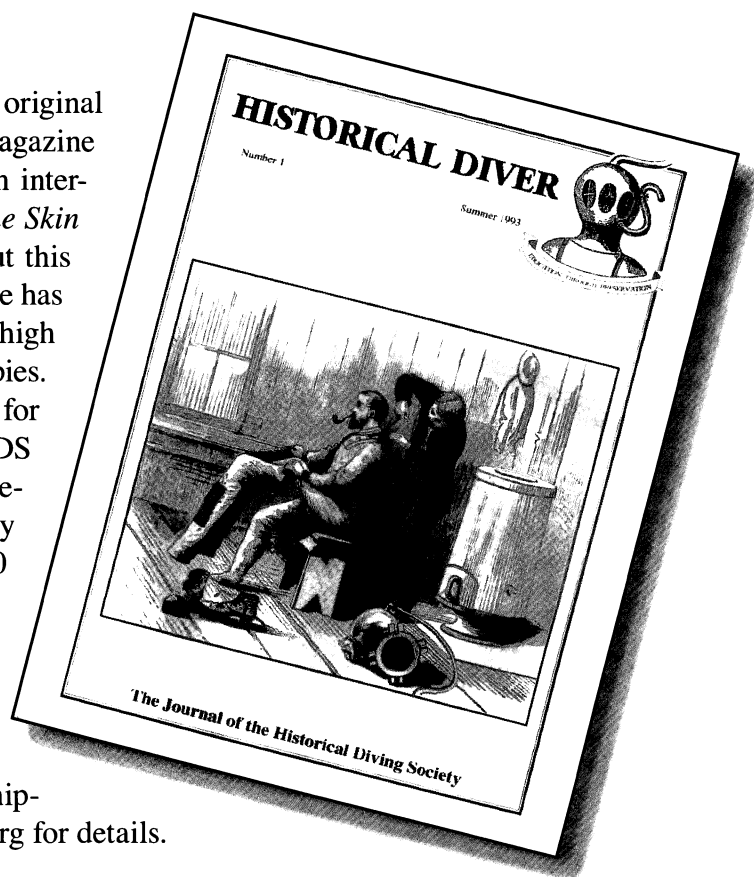


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Historical Diver Magazine Issue 1 sells for \$132.50!

Several members contacted us when an original 1993 copy of issue #1 of *Historical Diver Magazine* (HDM) sold for a surprising \$132.50 on an internet auction site. The rarer early issues of *The Skin Diver* magazine often sell in that range, but this is the highest price a copy of "our" magazine has sold, that we know of. One reason for the high price maybe that the HDS printed so few copies. Only 1,500 were printed compared to 2,000 for the first *The Skin Diver* issue. In 1995 the HDS storage unit was flooded and many of the remaining copies of issue #1 were destroyed by water damage. Many copies of issue 2 (1,550 printed) and 3 (1,100 printed) were also destroyed in the flood. Issues 1, 2, and 3 have only been available in photocopy form for some years. Complete sets of 44 issues of HDM, including a few photocopies, are available for a limited time for \$150 plus shipping. Contact the HDS office or www.hds.org for details.

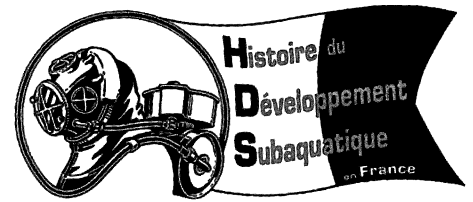


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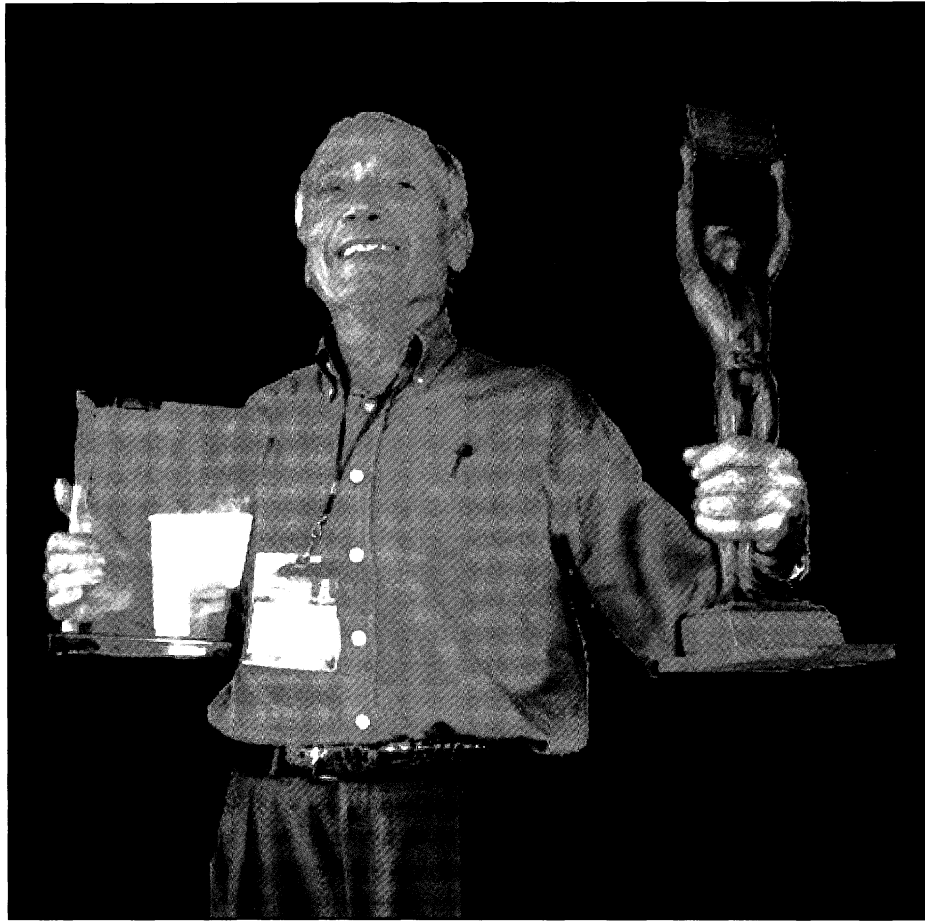
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Président d'Honor Henri Delauze receives top American Awards



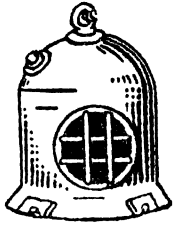
*Henri Delauze with his two American awards.
© 2005 HDSF*

The Society's President of Honor, Comex founder Henri Delauze, received two major American diving awards in 2005. Both awards were presented to Henri at the annual general assembly in Antibes.

The first was the *Historical Diver* magazine Pioneer Award from the HDS USA, which was presented by Executive Director Leslie Leaney, who was accompanied by his wife, Jill, formerly of the Musée du Scaphandre of Espalion. Leslie mentioned that as so many of the winners of this award were from France that the engraving should probably be in French, not English.

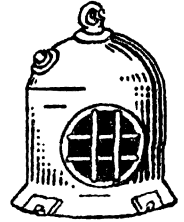
The second award was from the American Academy of Underwater Arts and Sciences for Distinguished Service. It is the second Academy Award that Henri has received. It was presented by Academy member Lee Selisky, who is also the former President of HDS USA, DEMA and current Board member of Divers Alert Network.

The HDSF booth at Antibes was well visited and we want to thank Daniel Mercier for his generous hospitality. More information on the assembly will be in the next edition of *L'ichtyosandre*.



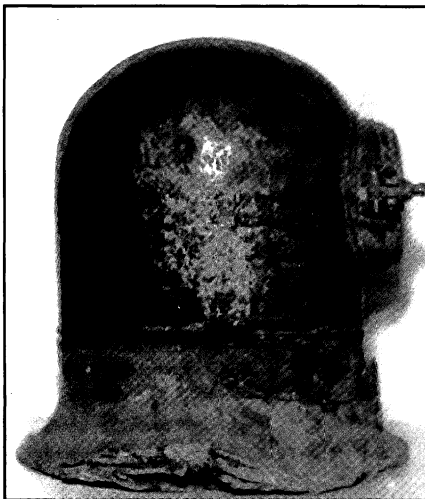
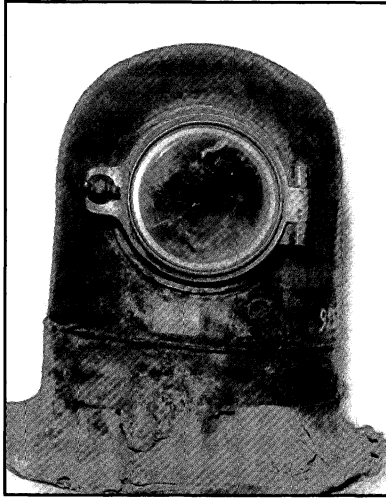
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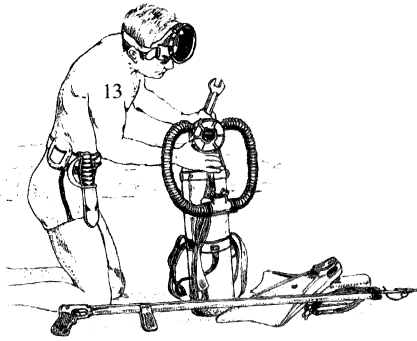


Historical Diving Helmets from the Central Naval Museum in St. Petersburg
by Georgy Rogachev and Aleander Sledkov, in association with Leslie Leaney

Hall Rees England, Circa 1910



This helmet is inventory number 9255. Similar helmets were used for shallow water diving and also for submarine escape. At one time the helmet was covered in canvas and attached to a diving dress. Most of the canvas and the complete dress has been lost, and only the portion around the neck area remains. A clearer illustration of this equipment can be found on page 29 of Lyon's book *Helmets of the Deep*. According to Sir Robert H. Davis, in his book *Deep Diving and Submarine Operations*, "It was installed in the submarines of the British Navy, and, to a smaller extent, in those of several other navies." We are interested in learning more about this Hall Rees equipment. Please send any information to the magazine editor for inclusion in a future issue.



SCUBA WORKSHOP

by Kent Rockwell

PROJECT THIRTEEN

Evolution of the First Single Hose Regulator

by Ted Eldred

This is the first time we have offered a co-authorship of Scuba Workshop, joining with Australia's Porpoise scuba inventor Mr. Ted Eldred and historian Des Williams. We are honored to share, posthumously, this column with the father of the first production single hose scuba regulator, Mr. Ted Eldred. Some 21 days before his passing (see page 56) Ted called and then wrote to Des Williams explaining the evolutionary design of his historic Porpoise scuba. Though written from memory we can see that Ted's recall of events, some 50 years past, remains clear and concise. If he had access to a modern Scuba R&D facility, we suspect we would find him chained to their ANSTI machine, contributing to modern regulator design. As we feel Ted's handwritten letter is an historic document we have transcribed it in exact detail and made no changes, though we did suggest the title.

In an e-mail from Des Williams:

I had Ted Eldred ring me last night, as I had sent him a photocopy of the article from the British HD Times magazine, re: the Albury gathering of 2004. He was very happy that I had mentioned the Silverman Graphs and had made reference to his belief way back then, that 300 litres per minute could be required by a diver under great stress. This belief was ridiculed in the early 1950's and he was very pleased to see this fact in print at last. Below is a letter I received from Ted on May 8, 2005.

Dear Des,

Many thanks for the copy of your excellent article. I especially appreciate your attention to the airflow achieved by the PORPOISE. This is rarely mentioned in overseas literature, mainly because the present day method of testing is haphazard and ill defined, allowing manufacturers to produce their own figures from inadequate testing procedures. The problem is that Scuba can only be tested by employing a respiratory pump that will



Ted Eldred attending the old Melbourne City Baths reunion April 30, 2005

replicate the breathing pattern.

Development of the PORPOISE had commenced in 1948 after spending the previous years designing, building and diving with OXYGEN REBREATHERS from which, combined with extensive spear-fishing activity, provided a basis for the development of the new equipment.

My first problem was to establish a set of performance standards on which to base my design. The only answer to requests both locally and overseas for a maximum airflow, came from the Medical Profession and the British Royal Navy, both of which recommended that a flow of 150 LITRES PER MINUTE (LT/MIN) would be as much as the human body could stand. My suggestion that my experience indicated a flow of around 250 LT/MIN was necessary, was ridiculed and told not to waste their time. However, my own knowledge gained from a few life threatening experiences with strong currents and rough seas had impressed upon me the necessity for the apparatus to meet a demand far greater than that which could be produced in a laboratory. So the PORPOISE was aimed at producing an airflow of 250 LT/MIN which was increased to 300 LT/Min in 1954, when more advanced information became available.

During the recent war years, an investigation had been conducted to determine Airflow Characteristics of Human Subjects by Leslie Silverman, SCD for the US Government. The results from this comprehensive work were restricted and unavailable to the public. I received my copy late 1952 and was delighted to see my airflow assessments vindicated. From that time on, I increased the airflow performance requirements of future designs to 300 LITRES PER MINUTE and set out to develop a first stage regulator to achieve this figure, resulting in the PORPOISE UNIVERSAL. No change was necessary to the second stage (mouthpiece). It should be noted that vacuum assistance was designed into the original

second stage, but performance was low key due to the restricted flows from early first stage regulators. The effect of vacuum assistance increased as improved models evolved, until its maximum effect was experienced in the 1956 MODEL UNIVERSAL. The first stage regulator of this model, as well as its increased airflow, also included a balanced pressure design which permitted the performance to remain constant over the decreasing cylinder pressure from full to near empty.

The Silverman Graphs established 12,000 FT lbs to represent a maximum heavy work that could be maintained for a 10 minute period.

A respiratory pump must be capable of inducing a simulated inhalation of 2.5 LITRES in .75 of a second for the test Scuba to register a maximum inspiratory resistance of 2.5 inches water gauge (W.G.) and an expiratory resistance of 1.6 inches W.G.

Note that these figures have been obtained using an ergometer in normal atmospheric conditions of warmth and security and must be seen as the minimum requirement to which could be added the psychological impact of distress, i.e. extreme anxiety, panic, pain, etc. Scuba must be capable of sustaining life in a hostile environment.

*Again MANY THANKS DES,
Keep up the good work.
Ted Eldred.
5-8-05.*

2005 Ted Eldred Rally by Des Williams

Ted Eldred's single hose scuba is still in use, 50 years after its invention.

On the 10th August 1953, Ted Eldred, Commander Maurice Batterham, Dr. Bill Taylor and Bob Wallace-Mitchell opened the first scuba school, at the historic Melbourne City Baths, where a heated pool offered shelter from the winter weather. It became known as the School of Underwater Diving & Swimming and was set up primarily to introduce the Australian public to the potential of recreational scuba diving and create a market for the "PORPOISE".

Today, in Melbourne, we are indeed fortunate to have three of the pioneer divers [written before Ted Eldred's passing] from the School of Underwater Diving & Swimming, still with us! So, on the 30th April 2005, Jeff Maynard and Des Williams organized a special "back to" re-union to celebrate and salute "our Australian diving pioneers," at the old Melbourne City Baths. This was a wonderful event, which included two hours of lectures from those pioneer divers followed by a couple of hours of frolicking in the historic heated training pool and diving

contemporary "PORPOISE" scuba sets. PORPOISE and its pioneers had returned to the Melbourne Baths, 52 years after it all began!

Sadly, Commander Batterham is no longer with us, but his grandson Nick and partner Anna Jeffries had prepared a short video presentation, which chronicled his amazing life, as a clearance diver, during WWII. It was immediately evident that Maurice was the best man, at the time, to be involved in the training of a new breed of recreational divers. Anna introduced the video presentation, which will soon be part of a life history documentary that she and Nick are working on, to honour Lieutenant. Commander. M. Batterham, OBE, RAN.

Next, we were treated to an excellent presentation from Bob Wallace-Mitchell, who spoke free form explaining that back in the early days, when Ted developed the PORPOISE, there was NO market for scuba gear in Australia! So, from scratch, Bob had the job of developing a market for recreational diving gear here in Australia. No small task, but brilliantly planned and with much hard work. The public soon became aware that the underwater world was within their reach. Bob also had to convince retail sports store owners, in the major capital cities, to install PORPOISE air compressors to re-fill cylinders for the new divers, even before the scuba gear was sold. This was really a ground breaking business development, but Bob was a very innovative and skilled businessman. He was the right man, in the right place, at the right time. PORPOISE gear was sold to the rapidly growing recreational divers as well as the Australian Navy, Air Force, Police, the pearling industry.

Our third speaker was Dr. Bill Taylor, who illustrated his presentation with an excellent Power-Point show of some of his magnificent early photographs, taken during his dive buddy days with Ted Eldred in the late 1940's and early 1950's. These were halcyon diving years in Australia, as Ted was working endlessly at the time, improving his home-built Oxygen circuit re-breathers, with innovative depth limiters. Bill's beautiful contemporary photos showed clearly how Ted's oxygen scuba models evolved over a few years. Photos showed Ted and Bill diving the O₂ Units wearing only football jumpers and shorts for protection from the sea. Bill's story behind Ted's O₂ units is an amazing one and will be the source of an interesting article all by itself, in the near future. The O₂ units even bore the name "PORPOISE", so Ted had decided on a suitable name for his underwater breathing equipment, even before his air scuba came along.

Bill then moved on to describe the development of the prototype "PORPOISE" air scuba, in which he and Ted made many test dives in the very early 1950's. Again, Bill illustrated his presentation with some magnificent contemporary photos of the air scuba prototype and even had some colour slides!!!



Ted Eldred fitting up Grandson Adam with vintage Porpoise scuba.

Ted then addressed the day's proceedings, himself, recalling some very funny and scary diving days, to the delight of all.

Following this magnificent list of speakers, we adjourned to the historic training pool within the Baths complex, to dive original (fully restored) PORPOISE scuba gear. The highlight of this event was the appearance of Ted Eldred in the pool with his 11-year-old grandson, Adam. Young Adam took his first scuba dive wearing the contemporary PORPOISE Universal scuba, under

the instruction of his grandfather! PORPOISE scuba enthusiasts Des Walters and Tony Gregory supplied their restored gear for this event and it was not long before Ted Eldred donned Tony's CA-1 PORPOISE set and spent some time swimming underwater with Adam. There were plenty of cameras clicking away to record this historic event.

Special thanks must go to Kent Rockwell in the USA, for his collaboration with Des Walters and Tony Gregory, to source special webbing to produce the cylinder harnesses and backpacks for the PORPOISE sets. The equipment worked perfectly and at one stage Ted Eldred was seen with a couple of spanners fine tuning Tony's PORPOISE regulator pool side! The Boss was back!

Our thanks go to three wonderful Australian diving pioneers, Ted Eldred, Bob Wallace-Mitchell and Dr. Bill Taylor and we send a salute to the late Lieut.-Commander Batterham OBE, RAN What a day!!!

Photos courtesy Des Williams, Tony Gregory and Steve Taylor.


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THE FIRST AMERICAN DIVING EQUIPMENT PATENT

Origins of Helium use in American Diving by James Vorosmarti, M.D.

There are two basic patents which address the use of helium in diving. The first of these is patent 1,473,337, "Atmospheric Compound for Diver's Use" issued on November, 11, 1923 to Charles J. Cooke. The second is patent 1,644,363, "Artificial Breathing Atmosphere and Treatment of Persons Exposed to Abnormal Pressures," issued to William P. Yant, Boyd R. Sayers, and Joel H. Hildebrand, on October, 4, 1927.

The Cooke patent was filed on August, 15, 1919. The aims of this patent were "to provide an improved atmospheric compound or breathing fluid to be supplied to divers while performing diving operations, the fundamental principle of the compound constituting the admixture of a suitably inert gas with oxygen in predetermined proportion, the use of such a compound obviating the dangerous and oftentimes fatal results of the absorption of nitrogen by the blood and tissues of the body as when atmospheric air is supplied to the diver under pressure." Two other objects were stated: "to provide a diluent for oxygen more suitable than nitrogen, such diluent consisting of a suitable inert gas which will not combine chemically with blood and tissues of the body breathed under pressure," and "to provide a new breathing fluid for divers' use ... in that since the dangers of decompression are largely overcome, the diver can be raised to the surface sooner, it naturally following that since the time for decompression need not be so long, the period of work on the bottom can be increased accordingly."

Cooke's basis for the use of helium was the inertness of the gas and very low co-efficient absorption of helium. He suggests using 1 part of oxygen to 4 parts of helium in the mix. He also suggests that the same ratio of oxygen to argon or hydrogen could be used, but because of the explosiveness of hydrogen, states it is doubtful if this could be done.

Because of the expense of the helium he also proposed that a system be developed to remove the carbon dioxide produced by the diver so that the only breathing mix required would be for the make-up of the oxygen used, foreseeing a closed breathing system. He mentions that he filed a patent for a carbon dioxide removal system on October, 23, 1920.

The patent by Yant, et al. covers much more than the Cooke patent and discusses the results of the research Sayers, Yant, and Hildebrand had done as a basis for the

patent. This research was published in a Bureau of Mines report dated February, 1925.

There are 17 claims listed in the patent. The first five concern the use of helium-oxygen in diving and are restricted to the use of this mix being employed only during decompressions from divers, air or nitrogen-oxygen being used for compression and bottom-time. The claims also include limiting the partial pressure of the oxygen in the mix to less than in air, or less than 1 atmosphere absolute when breathed at pressure greater than 75 pounds per square inch. Two of the claims also relate to not helium per se but to the use of any inert gas which has a greater diffusibility than nitrogen or a lesser solubility. Claims 6-17 relate to the use of helium-oxygen and other mixes in the treatment of decompression sickness with the same stipulations regarding the partial pressure of oxygen and the diffusibility and solubility of the inert gases. These claims cover the use of gas mixes during the phases of compression and decompression.

As one can see, these patents are miles apart in their details and on their bases. Cooke's patent is based on no evidence that helium-oxygen, or mixtures using other inert gases, would be at all useful. He bases the patent solely on the measured diffusibility of helium without any experimentation. On the other hand, the Yant et al. patent is based on the increased diffusibility and decreased solubility of helium backed up with research results. Cooke also was apparently unaware of oxygen toxicity and never mentions it in his discussion of the ratios of oxygen to inert gas. Cooke also did not recognize that the treatment of decompression sickness might be benefited by the use of helium-oxygen mixtures.

Elihu Thomas is now given the credit for being the first person to realize that helium might have use as diluent gas in diving. This was not always the case. In 1927 he published in "Science," a series of letters he had written beginning in 1919 concerning his interest in helium in diving. The first was a letter to Dr. W.R. Whitney of the Research Laboratory, General Electric Corporation, asking for him to review the general idea of substituting helium for nitrogen in breathing gases. He also wrote to the Bureau of Mines asking if he could get some helium from them to do experiments, but they never replied. Dr. J.C. McLennan of the University of Toronto, in a note in the "Chemical News" of December 19, 1919, requested

ideas for uses of helium other than for filling balloons. Thomson wrote to him but never received a reply. He did receive a reply to a second letter to Dr. McLennan in 1925. In his reply Dr. McLennan stated that he had called attention to Thomson's suggestion in a note he had published in *Nature* some years before. After this Thomson was finally given the credit for being the first to suggest using helium in diving. Thomson finished his article with the following moral: "If you have a good idea, publish it at once, or patent it, or both, in which case it is not easy for the other fellow coming along years later to adopt it without giving credit where credit is due." Good advice even today.

Should Thomson still be the one credited with being the first to suggest helium might be used to advantage in diving? Cooke's patent application was filed on August 15, 1919, several days before Thomson's letter to Dr. Whitney. Did they know each other, or was Cooke somehow aware of Thomson's interest? It could well be that both men had the same idea at the same time quite independent of each other.

Cooke followed up on his idea for a closed breathing system with Patent 1,681,029, Diving Apparatus. This is a completely closed system for mixed gas diving and was issued on August 14, 1928. Further study will show whether this was the first patent for a closed breathing system for diver use.

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- Liaison with Flag State Government regulatory authorities and related industry representatives to establish logical and practical regulations for the conduct of commercial diving and underwater operations
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Safety Hinges on Education

Despite industry knowledge that a three-man team is an absolute safe minimum, many bid requests still specify a two-man team. Accidents and fatalities continue to take place when companies and persons undertake hazardous underwater operations without proper knowledge and training regarding the dangers inherent in such practices. For this reason, videotapes are developed and provided to address issues such as: "Why A Three-man Dive Team"; "The Hazards of Differential Pressure"; and "Underwater Burning Safety". Additional multi-media presentations will be developed as a means of furthering education throughout the industry.

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An ADC Member is one that has agreed in writing to adhere to all applicable regulatory requirements, including the ADC Consensus Standards for Commercial Diving Operations; a document recognized globally as a comprehensive guide to the conduct of safe commercial diving and underwater operations.

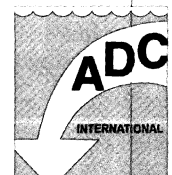
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Internet Auctions

Internet auctions and sales during recent months. Prices are rounded to the next highest dollar. The content of this column is provided in good faith by members for general interest and is not a definitive guide. Vendors' opinions of what items are, and what condition is, are not consistent. The HDS-USA and HDM are not responsible for any errors in descriptions, listings and prices. Items that Failed To Meet their Reserve (FTMR) have their highest bids listed.

America

DESCO U.S.N. Mk V. Stated as being serial # 122 and made prior to December 20, 1942. Missing original DESCO tag and with a Morse tag dated 10/12/17 attached. No tinning. Came with dress, Schrader weight belt, Morse leather boots, and a metal chest. Stated as being from the estate of a 1940's Navy diver. Sold \$5,925

DESCO U.S.N. Mk V. Stated as manufactured in 1945, with U.S.N. inspection stamp. "Modified by U.S.N. Diving Lab as experimental prototype to be used with Mark V suit or experimental vest." Mods consisted of an air control valve in the helmet and a screw in face port. Sold \$5,101.

Morse Commercial 4 light. Matched #s 5969. "Original" green patina. Canvas diving boots included. Sold \$4,750.

Morse U.S.N. Mark V serial #4288 date 4/30/42. Tag # 678. Appeared in good condition with tinning and came with dress, leather boots, weight belt, gloves, and other accessories. From the estate of Robert Boak, a commercial diver in the Great Lakes region. Sold \$8,403.

Morse U.S.N. Mark V serial # 4535 date 2-10-43. Tag # 860. No exterior tinning. Appeared to be in very good condition with transceiver installed. Sold \$7,650.

Morse U.S.N. Mark V serial # 5752 date 3-10-44. Tag # 801. Appeared complete, with a brown patina. Stated as coming from an estate that had owned it for over fifty years. Sold \$5,750.

Morse Shallow water helmet. With both weights and tag detached. Comms installed. Heavy patina. Ex San Diego tuna boat helmet. Sold \$5,600, but re-listed several weeks later by the same seller. FTMR at \$3,805.

Morse Shallow water helmet #6237. No weights, and with some wear and stated as needing repairs. Sold \$3,000.

Savoie Stainless steel air hat. No number stated. Described as never having been used, and as one of the last five original helmets Joe Savoie worked on. (Ed.- Not the last five he manufactured.) Sold \$4,900.

Savoie. Stainless steel air hat. No number stated. Described as in good all round condition. Sold \$3,250.

Russia

Russian Navy 3 bolt UVS - 50M, serial # 24. With welding lens. Located in Russia. Sold \$1,225.

Spain

Galeazzi Marina, 12 bolt. Matched serial # 33:700. Appeared complete and with a heavy patina. Located in Spain. Sold \$8,000.

United Kingdom

Heinke Pearler. Stated as being circa 1860. Appeared to be hand formed with a copper breastplate with a center exhaust control. Missing straps and nuts. Stated as being "valued 4 years ago" by the President of an HDS group at a "conservative" British pounds Sterling £15,000 (Approx. US\$ 27,000) Reserve stated as being U.S.\$ 22,000. Located in New Zealand. FTMR at opening bid of U.S.\$20,000.

Siebe Gorman & Co. Ltd. 3 light 6 bolt. Stated as having matching numbers.

"Used by Petty Officer Wilfred Bollard on HMS Reclaim. Identical to the helmet used by PO Bollard on his world record dive to 535 feet in 1948." Located in UK. Sold \$6,316.

Siebe Gorman . 3 light, 12 bolt, serial # 19,512, in very good condition with most of its tinning. Last style on manufactures plaque/tag. Located in Spain. FTMR @ \$5,469.

Accessories

Schrader Mk V knife. Good condition and provenance. \$1,828



Heinke Pearler

Vintage Scuba Gear

Emerson/Westinghouse Min-O-Lung oxygen rebreather. \$919.

Northill tank and regulator w/ harness. \$1650.

Scott Hydro-Pak masks. \$260 & \$373.

Scott Hydro-Pak back pack. \$171.

Scott MK VI semi-closed rebreather. \$1200.

Scuba Pro Visionaire full-face mask. \$282.

Spinneker single hose regulator. \$31.

U.S. Divers Golden Royal Aqua-Master. \$1712.

U.S. Divers Navy aluminum 90's twin tanks. \$261.

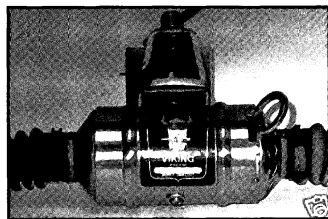
U.S. Divers Aqua-Master in box. \$352.

U.S. Divers/La Spirotechnique Scaphandre Autonome CG45 regulator. \$1065.

U.S. Divers Jet Air regulator. \$162.

Viking (Norseman) regulator. \$1002.

Voit 50 Fathom regulator. \$272.



Viking (Norseman) regulator

Scuba Accessories

Beuchat Jet Fins original. \$62.

Farallon fins w/ leg brace arms. \$77.

Panerai PAM87 Submersible 1000m E series watch. \$5280.

Panerai Compass Brevettato, 1940. \$1026.

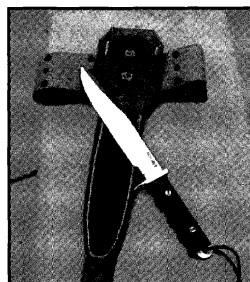
Randall #16 Viet Nam era dive knife. \$5205.

Sportsways Navy depth gauge. \$48.

U.S. Divers Vulcan Knife with sheath. \$112.

U.S. Divers Nemo depth gauge. \$29.

Wooden handled dive knife. \$161.



Randall dive knife

Underwater Photography Items

Mitchell 16mm movie camera with custom housing, appeared to be modified gun camera. \$826.

3 Nemrod Siluro amphibious cameras:

#1 Showing some surface wear and scratches, no flash attachment. \$36.

#2 Camera and flash attachment. \$51.

#3 Camera and box, no flash, camera described as unused. \$99.

Nikonos I, camera and lens only. \$52.

Nikonos I, camera body, lens and sport finder. \$127.50.

Nikonos I, camera body and lens. \$90.

Nikonos II Instruction Manual. Chicago \$4.

Nikonos II, Camera body and lens. Did not meet reserve price.

Nikonos II, Camera body, lens w/rubber cover, case. One lifting ear broken off the upper camera body. Sold for parts or repair. \$47.66.

Nikonos II, camera, lens and manual. \$87.

Nikonos III, Camera and lens only. \$115.50.

Nikonos III, Camera and lens. \$100.

4 Nikonos cameras--

#1 Nikonos I Camera with lens cap, rubber control knob covers, leather case GBP. \$133.51.

2 Nikonos II Camera only, serviced and appeared in good condition. \$91.

#3 Nikonos III Camera only, no strap. \$293.

#4 Nikonos III Camera only, no strap, described as "never been in water". \$483.

Paillard Bolex Underwater Camera housing with original wooden box and some accessories. Australia \$385.

Paillard Bolex Underwater Camera housing with 16mm Bolex camera body (no lens pictured or described) and original wooden box. \$510.

Paillard Bolex Housing with original wooden box. \$300.

Books & Publications

Underwater Photography, 1st Ed., 1954, Schenk and Kendall, no dust jacket \$11.51.

Underwater Photography, 2nd Ed., 1957, Schenk and Kendall, vg/vg dust jacket. \$10.50.

Underwater Photography, 1971, Townsend. UK \$4.76.

Nikon Underwater Photography with the Nikonos. \$15.

Skin Diver Magazine underwater photography issue, September, 1960. \$7.99.

Louis Boutan article clipped from 1898

Century Magazine, \$9.99.

Danger Below, 1968, by John Blaine, young adult. \$290.

Divemaster Skin and Lung Diving Equip. catalog. \$93.

Supreme Water Sports catalog, Sea Net Mfg. 1940's. \$68.

1961 *Sea Hunt* TV series board game. \$115.

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Classic Diving Equipment Groups

Due to the prevailing liability laws in America the HDS-U.S.A. does not conduct any in-water activities. Some American based divers have formed groups to restore, operate and preserve the classic equipment of America's rich diving heritage. These groups often contain divers who are members of the HDS-U.S.A. The activities of these groups are not official HDS-U.S.A. functions and the HDS-U.S.A. is not involved in any of the activities of these groups. This column is produced solely for the interest of our readers. Please consult the HDS-U.S.A. disclaimer at the front of this issue.



Brass Hat Diver

Brass Hat Diver had a great time working with the South Florida Council of Boy Scouts of America at the Homestead Sports Complex on November 12, 2005. We teamed up with World Water Sports of Fort Lauderdale and shared their portable pool. They offered a scuba experience and we offered a vintage shallow water helmet diving experience using a Morse helmet. With over 5000 spectators not everyone was able to enjoy a dip in the water. Those less fortunate, or too small to dive tried on the latest vintage dive gear fashion. This event was such a great success we are already working with World Water Sports for future events, such as demonstrating the time line from vintage to modern diving, with hands-on in their pool. For upcoming events check out our web page www.brasshatdiver.com or give us a call 954-261-6995 and stop by our shop at 5851 SW 21st West Hollywood, FL. We also want to thank all the vintage divers who have been stopping by and sharing stories, pictures and helping with our displays.



Sea scout trying out Morse Shallow Water helmet.

California Classic Equipment Divers

On September 3, 2005 CCED held their annual dive demonstration at the Los Angeles Maritime Museum in San Pedro, California. Diving from the vintage tugboat, ANGEL'S GATE, divers used the old TOA hat with traditional canvas dress, weight belt and boots reminiscent of the gear worn by the early construction divers in Southern California. CCED rigged a remote speaker from their OTS COM box to the observation platform so the viewing public could listen to live conversations between diver and tender. The old 1943 DeVilbiss compressor beat out a steady rhythm as a total of six heavy gear dives were made. The crowd loved it! Along with the live demonstrations, museum visitors had the opportunity to enjoy Torrance Parker's *20,000 Jobs Under the Sea* exhibit of early dive gear and the dive pioneers of Southern California. For those who haven't been to the museum there are three unique exhibits featuring dressed mannequins: one in sponge dress on the sea floor, one in commercial gear working on a pipe joint and then a diving locker complete with gear, tools and parts on work benches and shelves (a real diver's dream).



Jocko Robinson descending from the tug ANGEL'S GATE.

September 10, 2005 CCED was invited to College of Oceaneering's open house on their San Diego campus. Charlie Orr and Jocko Robinson each brought early bronze Widolf masks to test and several divers joined Brad Speer in vintage scuba. The seven heavy gear dives were made using Mark Howell's Chinese hat. COO provided the lunch of burgers, dogs and salads.

The College of Oceaneering Benefit Dive for Travis Robinson was held on November 5, 2005. Travis, as you may remember, was severely injured in a swimming pool accident that left him wheelchair bound. The fund-raiser was held in conjunction with COO's open house on the Wilmington campus and proceeds went to the Help Travis Fund. Organized by Dive 'N Surf and the Jimmy Miller Foundation, participants donated \$150.00 to dive a complete US Navy MK V rig. A total of 24 dives were made and some donated far more than the asked-for dollar. As of this writing Travis and family have returned from Portugal where he underwent the experimental stem cell surgery. The results are encouraging. Log onto www.helptravis.org for updates.

CCED Divers go Hollywood

A-Band-Apart Commercials called Charlie Orr for help; they wanted to rent helmet gear to film a dream sequence in an upcoming Foo Fighters music video, *Resolve*. This was not CCED's first movie shoot and experience with the film

industry dictated further discussions with Charlie and Al Pilkington. It was determined that a considerable amount of heavy gear diving would be involved, something that would put their non-diving bandleader at risk. Director Michael Palmieri wasted no time in hiring Charlie, Al, Jocko Robinson and Kent Rockwell to handle the extensive underwater work. Any Hollywood shoot involves a massive amount of people and this short underwater segment was no exception. Michael rented the tank situated among Wild West buildings on Universal's back-lot. Unfortunately, the one night, 10-hour shoot was marred when a power outage allowed a pressurized tank filter to burp muck back into the tank, clouding the gin-clear water. Close-up shots were finished with lead singer, David Grohl, close to the tank window and the shoot was rescheduled for the following week. This time the crane operator hoisted CCED's heavy dive gear to the top of the tank, saving much backbreaking labor. The tank finally warmed as the shoot finished, some twelve hours later. This was rough on mermaid Kristina Lum. Her conformal rubber tail required the crane to lift her free between shots.... so, at one point, the 24-year-old elected to stay in the tepid water for a 6-hour stretch, a real trouper. Stunt diver Jocko Robinson remained submerged for 90% of the time, logging one 7-hour stretch. Charlie handled the compressor and air distribution panel, Rockwell was safety diver for the mermaid, helmets and airlines and Pilkington remained submerged in scuba for each shot, handling scene set-ups, safety gear and stunt personnel.

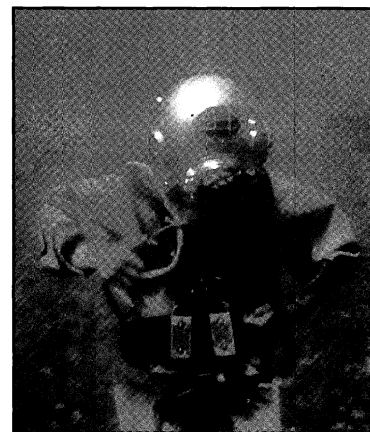
The story line follows David's daydream while eating sushi (nitrogen narcosis or puffer fish poisoning?). The diver is first befriended by a beautiful mermaid who then removes his air hose and finally his helmet underwater and then swims away with her victim. All filming was done underwater through the tank wall. Each time Jocko's hose was re-connected he was showered from the helmet's overhead vents and some concern was placed on Kristina's ability to pull him off the bottom in a flooded suit and boots. However, "The Tail Man" Thom Shouse's beautiful mono-fin rubber tail really worked and even the Las Vegas-based mermaid was surprised at the speed and power she could produce. In the end she towed Jocko by his breastplate with no apparent effort. Watching the DVD it's amazing how short the underwater sequence is when considering the hours of shooting wet. Time spent "on camera" underwater was about 15 hours, time onscreen 35 seconds. See michaelpalmieri.com, www.abandapart.com, www.mermaidrentals.com and www.foofighters.com for their music video *Resolve*.

North Coast Knuckle Draggers

The NCKD is a working equipment group dedicated to the cold dark waters of Northern California and Southern Oregon and is affiliated with Alpha Diving Industries Diving & Welding Training Group and Pacific Quest Dive Center in Arcata, California. On the 13th of August, 2005, a training session was held in preparation for the Humboldt Bay Maritime Exposition to be held on Woodley Island in the next month. Training commenced on the cobbled banks of the Early Hole on the Smith River. Mike Valentine provided his MKV heavy gear (this is the Millennium Desco MkV Helmet that Mike won from the HDS fund raiser in 2000, so purchase your tickets now, before DEMA) and with the Alpha Training Group set up the dive station. Mike's first dive lasted 15 minutes and then he tended the next five divers while others dove the KMB-18 and Luke Lucariello did underwater photo duty in his CH-5 helmet. Mike made a second MKV dive of twenty minutes for the photo session. Divers included Mike, Tim Moxon, Larry Dugger, Kari Shupe, Colin Moxon and Katy Payne with help from tenders Juan Santillan, Craig Allen and Luke Lucariello as Dive Supervisor.

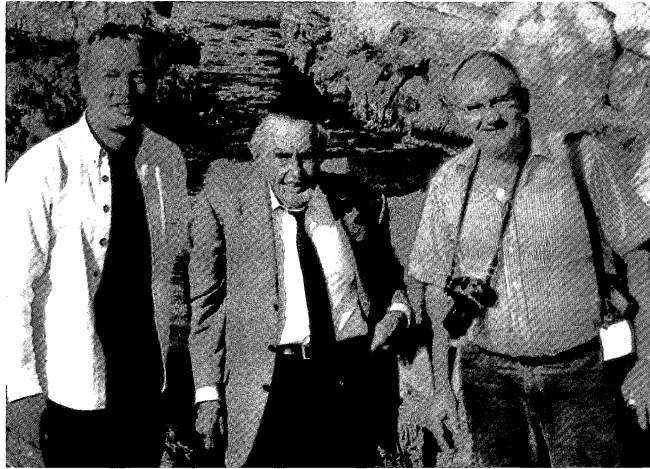
The Maritime Expo was held on the 24th of September and the Knuckle Draggers provided dive demonstrations and static displays. Harbormaster Susie Howser obtained the use of a 20-ton hoist and electric trolley winch and Luke fabricated a navy-style stage to lower the MkV divers into the bay. Alpha Diving provided a KMB-18 equipped diver for standby with Luke acting again as Diving Supervisor. Mike Valentine was awarded his MkV Diver Certification after his fifth and final qualification dive during the Expo. While most of the dives lasted 20 minutes, Mike walked around the bottom debris for thirty minutes before surfacing to the resounding cheers from crew and visitors alike. A total of five MkV dives and two KMB-18 dives were made during the day. Divers included Aaron Hovis, Jason Ball, Cyrus Meyers and Scott as well as the Smith River divers.

The best news of all is the Knuckle Draggers' new dive site. In conjunction with Mr. Ralph Davis and the L.C.I. Association they have been given tentative use of 1091, a floating museum in a Landing Craft Infantry ship. A surface supplied diving apparatus as a living history exhibit is planned. The North Coast Knuckle Draggers may be contacted at PO Box 1181, Arcata, CA 95518-1181 or (707) 825-7880 by phone or fax.



*Mike Valentine in his
Millinium MkV.
Photo: Luicaniello,
Alpha Training Group.*

Hans Hass returns to his first dive site



L to R. Konrad Kurt Hitzfelder, Hans Hass, and Philippe Rousseau.

On Saturday, October 29, 2005, Hans Hass, accompanied by his wife Lotte and a small group of diving historians, revisited the site where he took his first dive in 1937, almost 70 years earlier. The site is by the Eden Rock Hotel at Cap d'Antibes, Côte d'Azur, France, and the group retraced the path Hans took over the rocky outcrops along the shoreline. The visit was part of a schedule organized by members from different HDS groups that helped Hans, who was 86 years old at the time, to reconnect with the sites and locations of his youth. Several other sites were also visited, thanks to Philippe Rousseau's chauffeuring service. The following day, a dive boat operated by Francis Brunner took Hans out into the bay, where he donned a set of snorkel gear and visited some of his old diving sites. We hope to have photos of this in the next issue.

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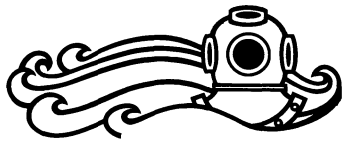
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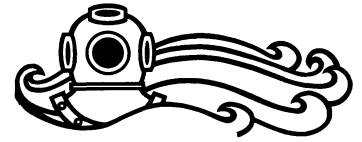
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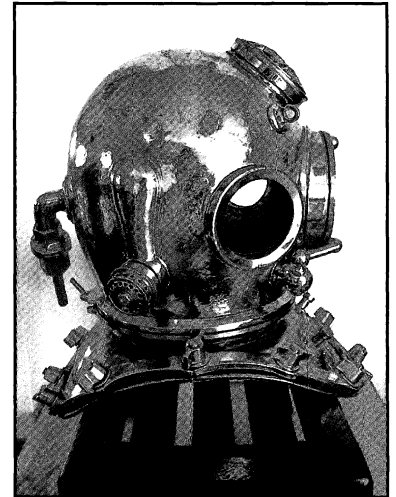
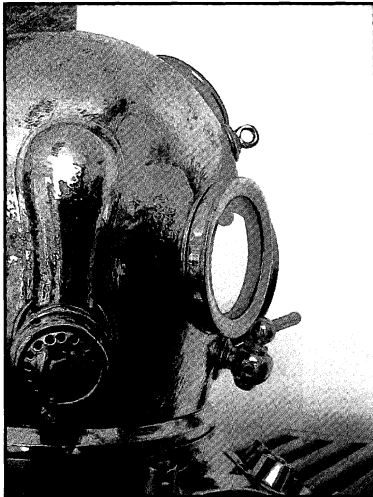
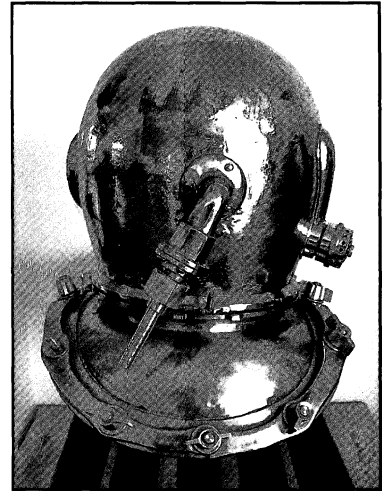
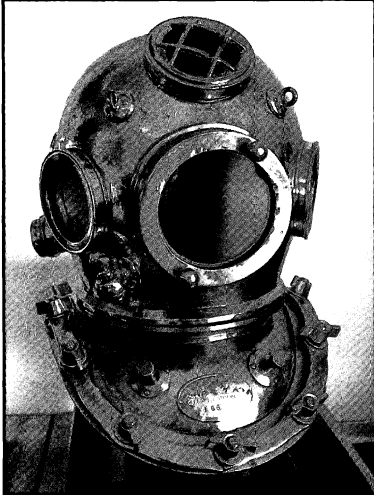
***UNDERWATER LIFT BAGS
ENGINEERED FROM THE BOTTOM UP!***



Helmets of the Deep



J. Carbonellgimeno S.A.
Barcelona, Spain



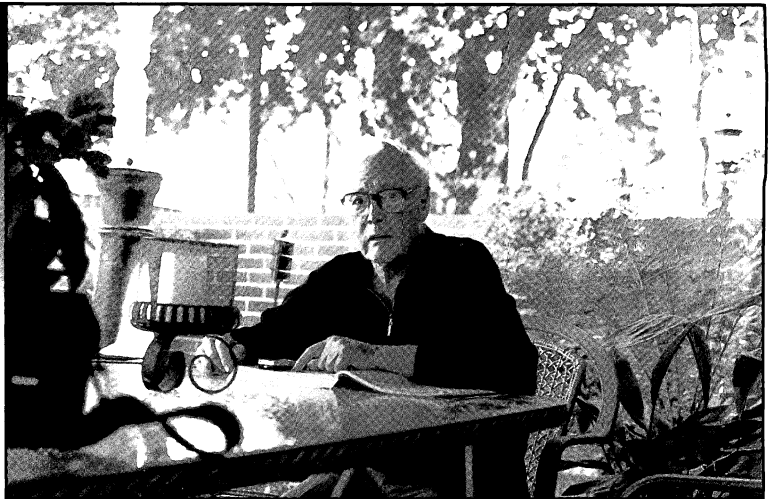
This rare helmet turned up on an internet auction site in 2005, and not much is known about the manufacturer. It is hand formed and displays a very picturesque manufacturer's plaque, stamped with the number 86. The helmet is similar to the traditional Siebe Gorman 12-bolt, but with a couple of distinct features. The spitcock is installed vertically, instead of the usual horizontal position, and the exhaust riser is formed from copper, and not brass.

The helmet is almost identical to the first one shown in the chapter on Spanish helmets, on page 284 of Lyons' *Helmets of the Deep*. That helmet also has a picturesque manufacturer's plaque stating that it is from the French company La Spirotechnique, which was formed in 1945 to market the Cousteau - Gagnan Scaphandre Autonome. The plaque address is also Barcelona, España, and it is stamped with the number 125. The accompanying text notes that "The company was said to employ one man who made the diving helmets."

Given the almost identical features of the two helmets, it is possible that they were both made by the same company, or craftsman, and the plaques of different client companies were added. If any members can supply more information on these helmets we will publish it in a future issue.

This helmet was offered at auction by David Guerrero of the Naval Antiques company in Spain. According to David, it failed to meet its reserve at the auction but was later sold for its reserve price of 10,000 Euros, approximately U.S. \$12,000, to an American diving museum. - Leslie Leaney

**In Memory Ted
Eldred
1920 - 2005**



Australian diving pioneer and inventor, Ted Eldred, passed away at his home on Friday the 26th of August 2005. Recognized as the father of the single hose scuba regulator, Ted had enjoyed international recognition of his achievements in the last few years.

Following the end of World War 2, Ted began inventing and perfecting rebreather designs that he then shared with his friends on weekend dives along the Australian coast. With the limitations of breathing pure oxygen and the success of the compressed air lungs Ted set about designing his trend setting Porpoise single hose scuba, and in partnership with ex-RAN Clearance Diver Maurice Batterham formed their Breathing Appliance Company in Melbourne in 1952. Having separated the first and second stages of the open circuit demand regulator Ted then set about perfecting the design. Interestingly, Emile Gagnan had been unhappy with his Aqua-Lungs two hose design and had been hard at work trying to convert it to single hose. Ted's company was sold to Le Spirotechnique (makers of the Aqua-Lung) in 1960, but not before Ted had designed the world's first balanced first stage regulator with a purge system to the second stage and air delivery rates up to 300 litres per minute and the first buoyancy compensator harness system. This was unheard-of performance from diving equipment of the period.

Ted lived alone with his dog Mandy, fabricating and inventing in his workshop at his country home in Yarck, Victoria. Over the past few years many Historical Diving Society members and historians went to visit him and in turn he traveled to Albury twice for the "Ted Eldred Weekends." Last May attended a special reunion event held at the old Melbourne City Baths where the first "School of Underwater Diving and Swimming" was held in 1953. For Ted, the highlight of the event was the chance to dive vintage Porpoise gear with his grandson Adam and give his personal and extended family and friends a chance to "see what I have been up to" all those long years ago. The HDS SEAP's Annual Ted Eldred Award will carry on Ted's legacy.

Funeral services were held on September 2nd, a beautiful spring day in the little country town of Alexandra, Australia, with son Tony, daughter Susan and his four grandchildren attending. Tony Eldred's 45-minute eulogy made everyone aware that "we" have only scratched the surface with one Ted Eldred, he was a prolific engineer! Tony had mentioned to Jeff Maynard and Des Williams that the last four years of interest and involvement in Ted's life achievements by HDS SEAP members, he believes, had prolonged Ted's life. (Let's hope it enriched his life as well.)

Ted's four grandchildren each presented an item near and dear to Ted's heart, the items were: an ice hockey puck for his professional ice hockey days, a toy dog for his love of his dog Mandy, some native wattle from the trees on his property at Yarck and his HDS SEAP Porpoise Award! Des Williams gave his eulogy followed by Dr. Jan Watson who thanked Ted for the contributions he made to marine biologists.

Members from the diving community honoring Ted included Tony Gregory, John Osmond, Des Williams, Des and Val Walters, Jeff Maynard, Zo and family, as well as Anna Jefferies and Nick Batterham representing Lieut. -Commander Maurice Batterham, OBE, RAN.

"Those of us who had the honor to know him over the last few years, who listened to his quick wit, marveled at the clarity of his memory, enjoyed his humour, or just had a sense when we were with him that we were in the presence of a very special person, will miss him. Yet we will think of him often when we dive."

Condensed from the writings of Jeff Maynard and Des Williams.

In Memory John Nesbit

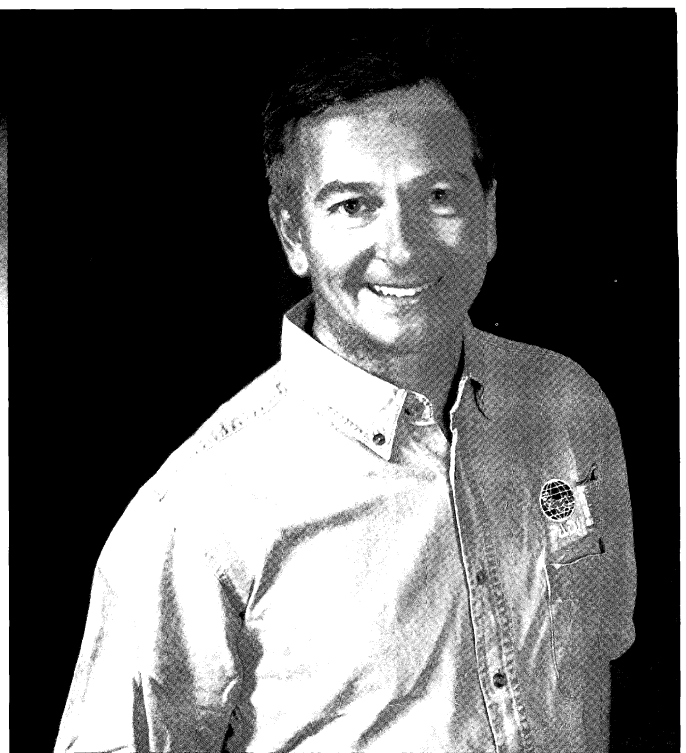
It is with deep regret that we announce the passing of John G. Nesbit, PADI's Retail Business Consultant. His life, unexpectedly cut short in a tragic accident on Sunday, August 7, 2005, will be remembered as vibrant, animated and significant.

John G. Nesbit, a native of Greensboro, North Carolina and a U.S. Marine Corps veteran, attended High Point College and University of North Carolina at Greensboro, majoring in history and later graduating from the University of Phoenix with a Bachelor's of Science degree in business management. Nesbit first stepped into the public spotlight while working in television for fourteen years at WFMY-TV2, the Greensboro area's local CBS affiliate. As Associate Producer and co-host of the station's "Good Morning Show," he quickly adapted to taking stage in front of a camera. John's natural charisma shined through and his down home charm and sense of humor provided an instant connection with audiences.

In 1987, John and wife, Mary Kaye, set their horizons on the dive industry when they opened up a PADI Five Star facility, Island Hoppers Dive Center, in their home town of Greensboro. The Nesbits immersed themselves in the industry and quickly became active contributors to PADI's Retailer Advisory Committee and DEMA's Promotion Advisory Committee. Their passion for scuba diving was clear, as were their intentions to leave the industry in better condition than they found it.

With this in mind, Nesbit accepted the position as Manager of the PADI Retail Association in 1994 and moved with Mary Kaye to Southern California. John brought authenticity and credibility to the retail association because he had walked the walk for several successful years and brought this experience to bear in a leadership role in the diving industry. In over 11 years of working for PADI's International Retail and Resort Association, John's energy never faded. It was his enthusiasm for the business of diving that led him on a crusade across America and overseas, conducting business education seminars and workshops with the members.

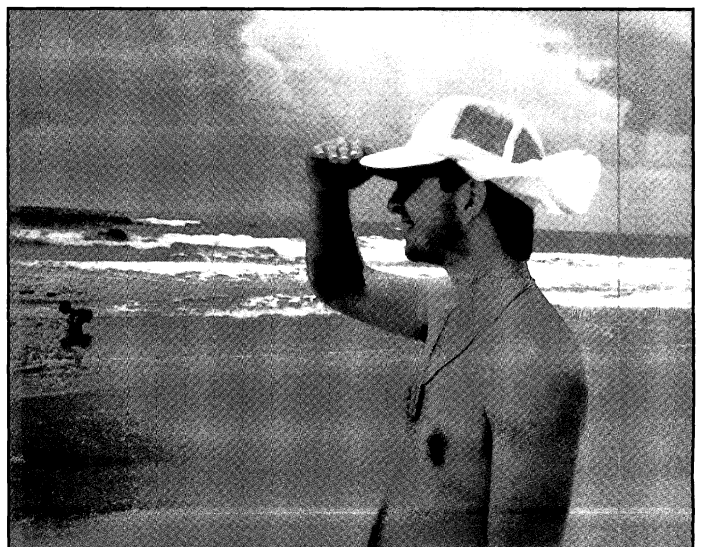
John greeted each member with a hearty handshake and warm smile, as he exemplified customer service through his everyday actions. It was his belief in the fu-



ture of the diving industry and optimistic attitude that drove him to share his philosophy with others.

John will be missed, but his life will be remembered and celebrated as a noble and honest contribution to growing an industry, educating professionals, sharing a dream and making people laugh. The PADI Family extends its deepest condolences to Mary Kaye Nesbit, Andy Nesbit and the family and friends who were lucky enough to know John over the years.

Drew Richardson,
President & Chief Operating Officer
PADI Worldwide





Dollie Agee “Mom” Orr California Classic Equipment Divers 1920 - 2005

We are sad to report the passing of Dollie Orr, known to all the divers she watched over simply as “Mom.” Dollie was in her 80’s and she didn’t dive. In fact, she couldn’t even swim. But, she was as much a part of the California Classic Equipment Divers as the most experienced diver in the group. It was only during the past year, that her failing health caused Dollie to miss any of our events. She was all ways there to help with the displays, sell t-shirts, or simply watch all the cameras, dive gear, jackets, etc., that the divers left in her keeping. And, everyone got a least one of her hugs before the day was over.

“Mom” was born on May 14, 1920 in the small rural community of Oak Grove near Malvern, Arkansas. She was the youngest of nine children, and grew up during the depression. The family had no running water, electricity or plumbing, and she often told stories of what it was like living and working on the family farm were everything was done with mules and wagons. Her first experience with diving was during this era. Her brothers made diving helmets out of old water buckets, using a bicycle hand pump for air and dove in the Ouchita River for freshwater clams.

Dollie was only 15 years old when she married in 1935, and moved to Wilmington, California just two weeks later. There she raised a family of two girls and a boy, and spent over 60 years living in the house they all called home. Dollie found work in the fish canneries on Terminal Island, and later at a place in Wilmington called the Beanery, where her pay was lunch and two cans of the food that was being processed that day. A hard worker all her life, she was always busy doing something to bring in a few dollars to buy something extra for the family. Dollie cleaned houses, took in ironing, did yard work for the neighbors, trimmed palm trees, painted, and had a licensed child care service. She was an excellent seamstress, and would make dresses and do alterations for people. She worked at Union Ice until they closed in 1973, and later worked as an aide at the Gulf Avenue El-

ementary School. The list of jobs she did is endless and often they were hard, dirty jobs even for a man.

Dollie was also an excellent cook. She loved to crochet and do crafts of all kinds, and to garden. Her garden was filled with so many vegetables that she would share them with the neighbors and for many years furnished large arrangements of flowers for Sunday church services. She also loved children and small animals. The neighborhood children often brought her an injured kitten, bird, or puppy and she never failed to take the animal and the child to a doctor.

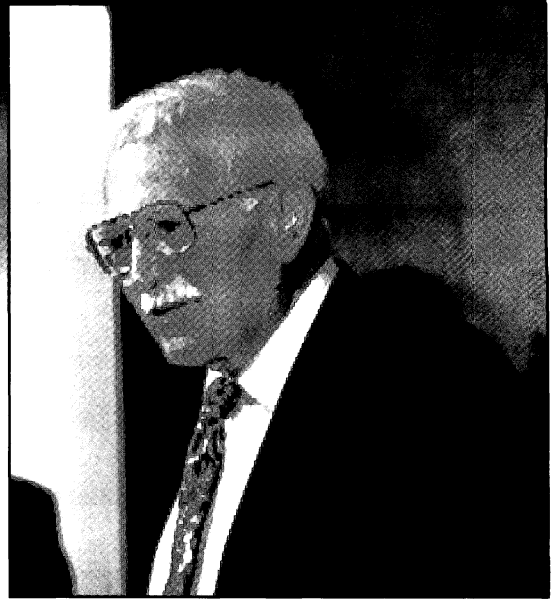
Dollie’s two girls were wonderful, but she truly loved boys. Since she was only blessed with the one boy, she just adopted all the extra ones that dropped by her house. We are sure she would have been pleased to see so many of them on the day that we all finally said good-bye to her. Her minister, Rev. Harvey Martindill was one of her “Boys,” as were all the pallbearers: Mark Howell, Jocko Robinson, Chris Webb, Kent (Rocky) Rockwell, Al Pilkington, and Bill Kurka, who are all members of the California Classic Equipment Divers, the group that Dollie spent so much time being a mother to.

“Mom” passed away on November 26, 2005 at the age of 85. She was preceded in death by her husband, Erwin C. Orr, and her youngest daughter, Alma Phillips. She is survived by her son, Charles; daughter, Dorothy Barstad; grandsons, Barry Barstad (Connie), Bill Drake (Rhonda) and Brian Drake (Cathy), and granddaughter, Pam Batey; eight great-grandchildren, and three great great-grandchildren.



“Mom” sitting with Harold Nothing at the College of Oceaneering dive on 1/18/03.

**In Memory
Charley Jehle
Founder of Sea Quest**



Charley Jehle, a SCUBA diving pioneer and Founder/President of Sea Quest, passed away Sunday, July 31, 2005. Charley started his diving career in Long Island, New York after seeing a display of diving equipment in a local sporting goods window. After months of hounding the owner to sell him the equipment, the owner finally acquiesced and Charley's love for diving was born. He and a few of his buddies started one of the first diving clubs in New York, often cutting family dinners short so his club could use the dinner table to hand-make their wetsuits. His adventures eventually landed him a full time commercial diving job at the Northville Oil docks. From commercial diving, he was hired by AMF Voit as a sales representative on the East Coast and then the Marketing Director for the Water Sports Division in Anaheim, California.

Seeing a need for a company that specialized in buoyancy compensators, Charley left AMF Voit in 1971 and founded Sea Quest. Sea Quest, and Charley's innovative designs are credited with improving the safety of diving, by introducing and helping entrench the necessity of buoyancy compensators for sport diving. In 1974 Sea Quest became the U.S. distributor for Mares and introduced the first non-rubber diving flipper to the U.S. market. Charley formed alliances with Deep See in Hawaii and foreign distributors to help make Sea Quest the well-known worldwide name it is today. Charley is remembered for his honesty, directness, respectability and integrity as a businessman. His motto was, "Take care of the people first and the bottom line will take care of itself." Success eventually attracted SUUNTO and in 1982 Charley sold Sea Quest to this unlikely, but ideal suitor. Sea Quest is

still located in Southern California and is presently owned by Aqua Lung. Coincidentally, Aqua Lung is run by Don Rockwell, who was a hungry college kid Charley hired in the late 1970's to do part time BC repairs.

Some of Charley's highlights include building one of the first shark cages to use for testing underwater shark repellent; a four year stint in the U.S. Navy as a SeaBee during World War II; working as equipment consultant during underwater filming of the James Bond 007 movie *Thunderball* with Sean Connery; a three-week trip to Columbia, South America using his underwater skills to help dredge for gold – which included a week long pursuit by banditos, whom they finally were able to outsmart (some of the gold they brought back is still on display at Knott's Berry Farm); and finally, a personal meeting to present and sell Vice President Lyndon Johnson wetsuits for his daughters.

Charley's passion for diving will continue through a book of his early commercial and SCUBA adventures entitled "Diving With Charlie at 0500". Anyone who knew Charley knows he was not one to ever get up early, but it is something he did for diving, something he truly loved. The book is being edited now and will be available in late 2005.

In his retirement Charley enjoyed gold mining, traveling, woodturning, photography, gardening and his grandchildren. Charley was 80 years "young" when he passed away and is survived by Frances, his wife of 55 years, his children Laura Peppard of Reno; Chuck Jehle of San Luis Obispo; Linda Jehle of Denver, Colorado; Anne Jehle-Kosanovic of Vista; and 5 grandchildren; Iris, Ginger, Kelsie, Braeden and Justin.

Information demandée sur la vie de John Date

WANTED Information on the life of John Date

AVERIGAR Informations on la vida de John Date

Information demandée sur la vie de;

Nom: Date, John

Magasin: Date Diving Equipment Ltd.

Adresse: 385 rue Concord.

Ville: Montréal, Qué, Canada

Manufacturier, Distributeur et réparation de
Schaphandres de Plongeurs et d'équipement

Aqua Lung.

Sa Photo

Sa date de naissance

La date de sa mort

Le gerant de Date Diving Equipment en 1963
s'appelait

Kenneth E. Garlick.

RECOMPENSE de 50.00\$ Canadian. Pour tout les
Renseignements ci-haut.

Nous achetons l'équipement John Date.

WANTED Information on the life of John Date:

Name: Date, John

Store: Date Diving Equipment Ltd.

Address: 385 Concord Street

City: Montreal, Que, Canada.

Manufacturer, Distributor and repair of Hard Hat
diver equipment and Aqua Lung.

His photo

Date of Birth

Date of Death

The name of Date Diving Store manager was

Mr. Kenneth E. Garlick

Around 1963.

REWARD of \$50.00US for all the information
required.

We buy John Date gear.

AVERIGAR Informations on la vida de:

Apellido: Date, nombre John

Almacen: Date Diving Equipment Ltd

Direction: 385 Concord Street

Ciudad: Montreal, Que, Canada

Manufacturer, Distribution d'équipo de buzo y
Aqua Lung Producto.

Su photographia

Fecha de nacimiento

Fecha de su fallecimiento

Kenneth E. Garlick estuvo de Data Diving
Equipment, 1963.

RECOMPENSA de 50.0 U.S.\$ o 1250 R.D pesos
para el todo.

Y tambien, yo compare equipo de John Date.

*Commission: 10%
pour affichage.*

*10% Commission
for the exhibitor*

*NOTA: Regalo 10%
para el cartelero*

Envoyez a: G. BOISSY

Send to: G. BOISSY

Envear: G. BOISSY

BO-LAN

**85, rue Lavigueur
Qué, Qué, Canada**

G7R-7A8

E-Mail: bo-lan@sympatico.ca

Tel: 418-525-8893

Fax: 418-875-1786/525-8893

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DIVING HELMETS AND PUMP FOR SALE

Pristine Siebe Gorman 2 man pump in original mahogany case (c. 1920); 12 bolt Siebe Gorman helmet matching (c. 1949).

Diving boots and sleeve expander included. All believed to be owned by White Star Line and never or little used, \$15,600 for the lot. DESCOE Mark V helmet matching (1943) in excellent condition \$5,000. Rare Drager self breathing helmet made in Brazil (c. 1935) bought in Amazon, excellent condition \$3,350. Miller Dunn Divinhood One (c. 1910) with heavy lead collar, in excellent condition \$6,000. All subject to prior sale.

Call: Wim Jessup, 914-253-6677 ext; 103 or e-mail wimj@nauticalsenses.com view at : www.nauticalsenses.com

8 1/2 Band Mask 1969. No name plate. Two hose regulator plus parts. Technical manual Aqua Lung, model DA Bu ships. Single hose Calypso, serial 1773.

Jim Bell: Phone: 612-729-9766, or e-mail: jebjr@mn.rr.com

YOKOHAMA SUITS One No. 3 type A, **THIS SUIT IS STILL IN ITS UNOPENED BOX.** The box is just as it cleared customs in 1988, Price \$1,600.

One No. 3 Type A, new unpunched, price \$1,200.

Phone Dave Clark: 206-783-6699, or email: dlclark@nwlinc.com

Korean Helmets, Pre World War II. Three light, 12 bolt with manufacturer's plates. Photos, prices, descriptions on request. Jim Shuttleworth.

Call **909-595-6655** or email jnipinxit@aol.com.

P.O. BOX 93575, Industry, CA 91715-3575.

Diving Helmets For Sale. Schrader Mark V 1943 \$6,500, Drager DM20 matched \$3,400, Siebe Gorman deep water pump circa early 1900's, fully restored in beautiful original teak box \$7,000, Russian Navy 3 light helmet \$1,000. Also many other nautical antiques and scientific instruments. Located in San Fransisco. All subject to prior sale. 415-775-1165 or info@franksfisherman.com.

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A. Schrader Diving Equipment Co. Historical Package over 40 old actual diving prints. Much history and previously unknown information on Schrader \$69.00 w/ U.S. postage.

Diving With and Without Armor. Diver J.B. Green's 1859 autobiography. Reprinted with added news articles pertaining to him. Only \$12.00 w/U.S. postage.

U.S. Navy 1916 Diving Manual. The jewel of all Navy Manuals! 172 pages with 42 illustrations. Professionally reprinted, only \$19.00 w/ U.S. postage. Ray Mathieson, 16509 Sylvan Dr., Bowie, MD 20715. 301-464-8852 Check or Credit Card

DIVING HELMETS, BOOTS & KNIVES Plus lots more!

12 bolt 3 light Tin plated, **unused** - \$1000

12 bolt 4 light Tin plated, **unused** - \$1100

Brass Divers Knives, New - \$150

Brass diving boots - \$200

All authentic. * will ship * call **Gio@ 805-461-3500** or email **for pictures** GMDI@CHAR-TER.NET

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A. Schrader's son cuff expanders. \$150.00 per pair, stamped and in great condition. At least 53 years old.

A. Schrader & Son cuff expanders, date 1887 to 1896! Stamped, unique shape. V.G. \$400 per pair. Only 2 pairs.

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D.T. L. Assy, for communications \$65.00.

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Telephone cable connectors \$70.00.

Schrader MkV face plates unused \$100.00.

Tee wrenches \$60.00.

Wing nuts \$10.00 - \$12.00.

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Checks or credit cards. Ray Mathieson, 16509 Sylvan Dr., Bowie, MD, 20715. 301-464-8852 .

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Classified

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Original Movie Poster, collection, whole or individual items. Entire theme is ocean adventure/scuba/scifi., Contact John Brill, 303-979-0655

WANTED

Spanish collector buys all kind of antique dive helmets, knives, etc.

Contact :<http://www.snorkel.net>

e-mail: snorkel@snorkel.net

Phone; + 34-9-72-22-11-37 (SPAIN)

Wanted, collar for Morse Mark V, contact boyer2818@earthlink.net

HAVE 3 PERFECT condition Korean helmets, need bonnet (top) for 1942 DESCO MkV. Will trade Korean helmet for MkV bonnet or for any Russian, Asian, or cool helmet that will diversify my massive three-hat-collection. Eric 808-627-1102 email: eric.macdonald@navy.mil

WANTED: MARK V ORIGINAL TWELVE BOLTS + SUIT IN GOOD CONDITION. E-Mail: Pechy1@libero.it. Fax: 00-39-019-741-6021. Cell: 00-39-335-710-5296.

MORSE Shallow water helmet, pair of 1940's black Churchill swim fins. Call Mark 949-770-4920 LAFIRE-BOAT@AOL.COM

EARLY U.S. DIVER J-VALVE, pre 1953 with the side yoke mount. Pair of 1940's black Churchill swim fins. **Call Mark: 949-770-4920 or lafireboat@aol.com**

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WANTED: Two original Morse lead weights for a WWII era **Morse US Navy Mark V weight belt.** The weights should be marked 'A.J. Morse & Son, Boston Mass. USA' contact: jack.schrader@cox.net.

JOHN DATE HELMET, gears, books, photos, flyers, posters etc. Send information and prices with a description to:

'La Societ  Historique du Plong e du Quebec'

964 Chemin Thomas Maher, Ville du Lac St Joseph, Quebec, Canada G0A 3M0

Fax 418-875-1786

INFORMATION WANTED:

Any information on diver **CHARLES CONDERT** Brooklyn, NY, ca. 1825-1832.

Contact Mike Gray at omgray@worldnet.att.net or 19522 Hampton Drive, Boca Raton, FL 33434.

WANTED: SKIN DIVER MAGAZINES. 1952 September. 1953 January, October. 1954 May. 1955 January, June, July, August, September, December. 1956 April. 1957 May. 1960 May. 1961 December. 1963 February, March, November. 1964 August. 1974 May. 1976 May, October. 1978 February, September, October. 1979 September. 1981 October. 1986 February. Buy or trade. Leslie at LLeaney@aol.com.

WANTED: Circa late 1800's Heinke breast plate. TOA or Yokohama breastplate. Miller Dunn MkV. Leslie @ LLeaney@aol.com.

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Annual Membership Information

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- | | |
|---|--|
| <input type="checkbox"/> Founding Benefactor (Lifetime Membership) .. \$1000.00 | <input type="checkbox"/> Family (Domestic USA Only)\$50.00 |
| <input type="checkbox"/> Corporate \$100.00 | <input type="checkbox"/> Individual (Domestic USA Only)\$40.00 |
| <input type="checkbox"/> Diving Clubs \$50.00 | <input type="checkbox"/> Student (Domestic USA Only)\$30.00 |
| <input type="checkbox"/> Institutional (Colleges and Schools)..... \$50.00 | <input type="checkbox"/> Mexico and Canada\$50.00 |
| <input type="checkbox"/> Dive Stores \$50.00 | <input type="checkbox"/> Overseas.....\$55.00 |

Brief description of your interest in diving. Maximum of 24 words (optional):

I wish my name, address, phone number and above details to be entered in the member register. ☐ Yes ☐ No

Signed: Date:

Please complete for Membership and/or Merchandise — Please Print Clearly or Type

Name: _____ Member No. _____

Address: _____

City: _____ State: _____ Postal Code: _____ Country _____

Telephone: _____ Fax: _____ e-mail _____

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Method of payment:

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Credit Card: ☐  ☐  ☐ 

Card NO: _____

Exp. Date: _____

Name on Card (Please Print) _____

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CA residents add 7.75% sales tax.	
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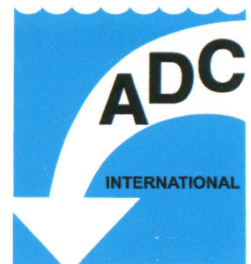
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